

ATTORNEY DOCKET NO
1125-CS

PATENT
U.S. Ser. No. 09/ 821,897

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

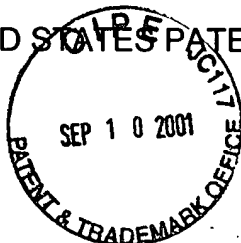
Applicant; Luo, Zheng

Serial No.: 09/821,897

Filed: 03/30/2001

Title: SYSTEM ON A CHIP WITH MULTIPLE POWER PLANES AND ASSOCIATE
POWER MANAGEMENT METHODS

Hon. Commissioner of Patents
Customer Service Center
Initial Patent Examination Division
Washington, D. C. 20231.



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Sept 8, 2001
Date

ATTENTION TO THE OFFICIAL DRAFTSMAN
TRANSMITTAL OF FORMAL DRAWINGS

Transmitted herewith are is thirty-seven (37) sheets of formal drawings to be substituted for the drawings originally filed in connection with the above-identified application for patent.

Respectfully submitted,
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By: [Signature]
James J. Murphy
Reg. No. 34,503

Date Sept. 7, 2001

FOR FILING

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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/821,897	03/30/2001	Luo Zheng	1125-CS

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CONFIRMATION NO. 8975

FORMALITIES LETTER



OC000000006434480

Date Mailed: 08/16/2001

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

This application has been accorded an Application Number and Filing Date. The application, however, is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a)

The required item(s) identified below must be timely submitted to avoid abandonment:

- Substitute drawings in compliance with 37 CFR 1.84 because:
 - drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch);

A copy of this notice MUST be returned with the reply.

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PART 2 - COPY TO BE RETURNED WITH RESPONSE

5/17/99: BABRAHA1 00000041 05021897

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

130.00 00

FIG. 1

1/37

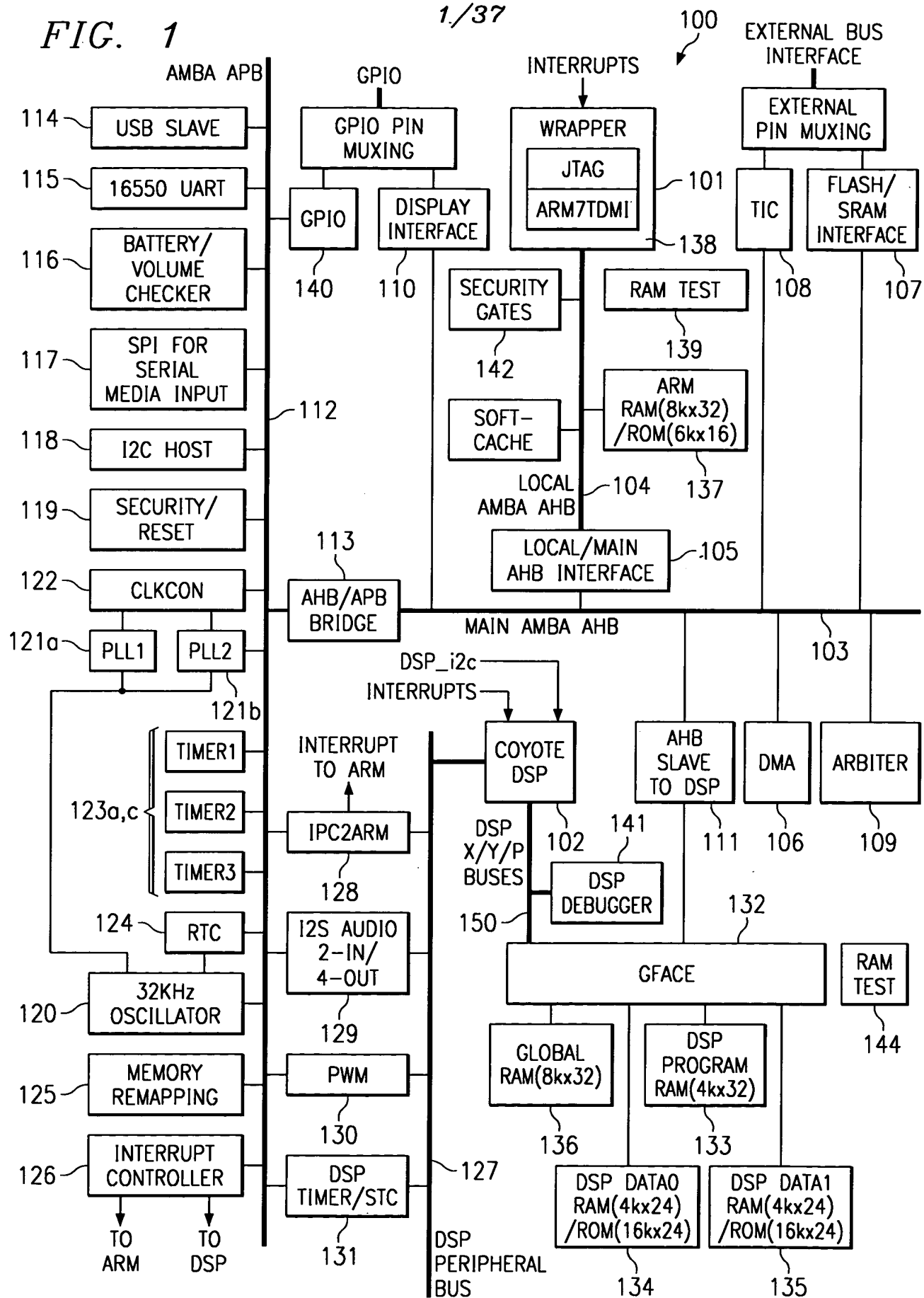


FIG. 1

FIG. 2A

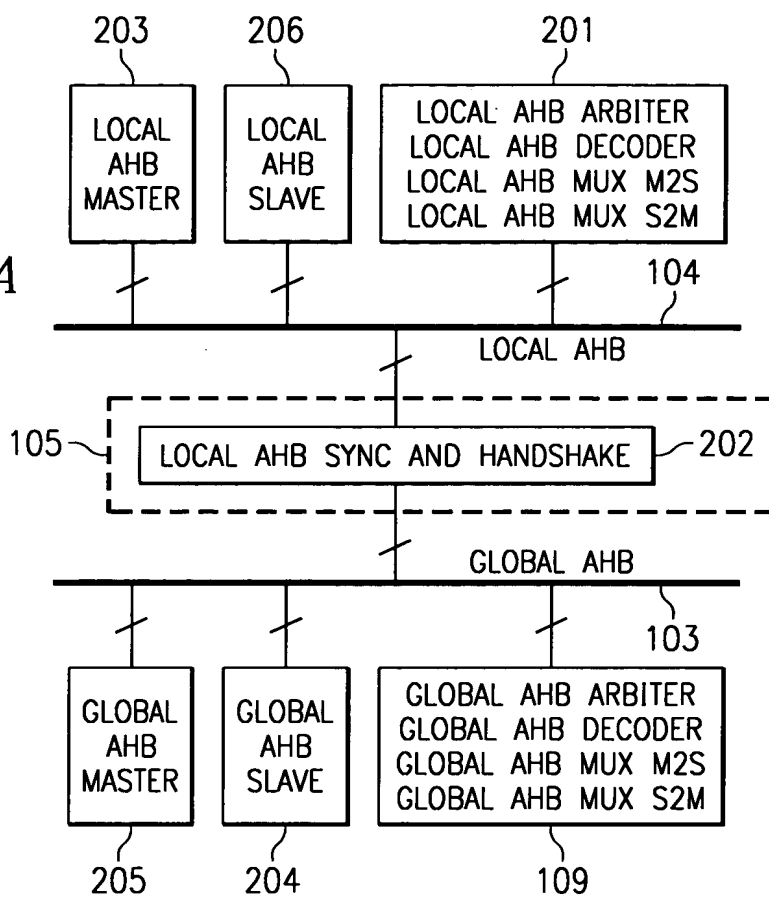


FIG. 3

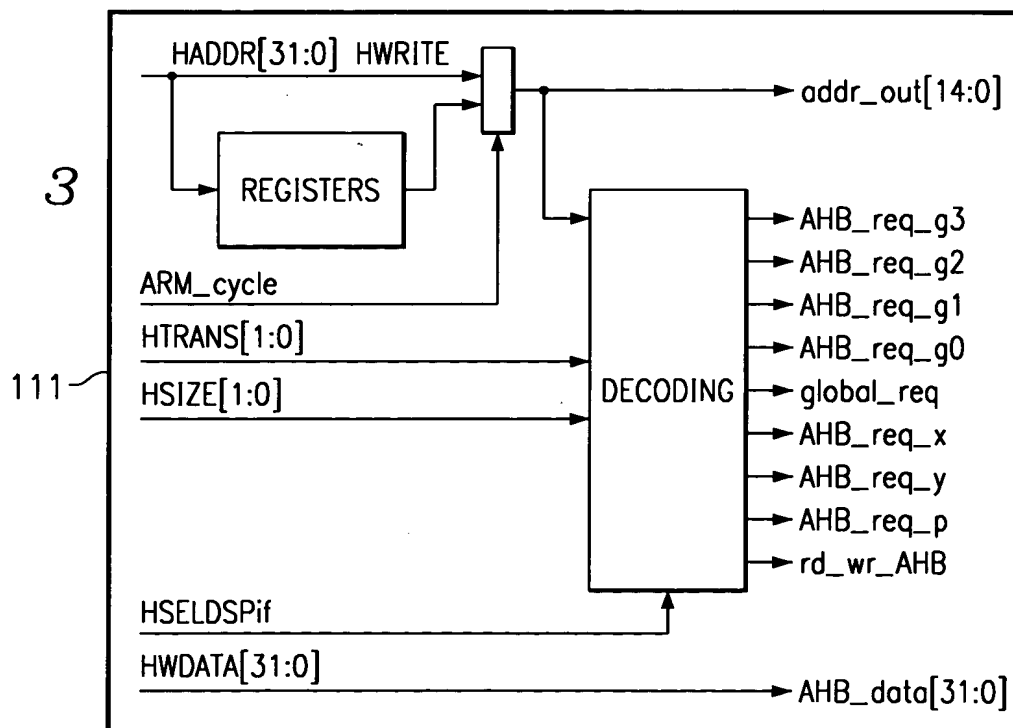


FIG. 2B

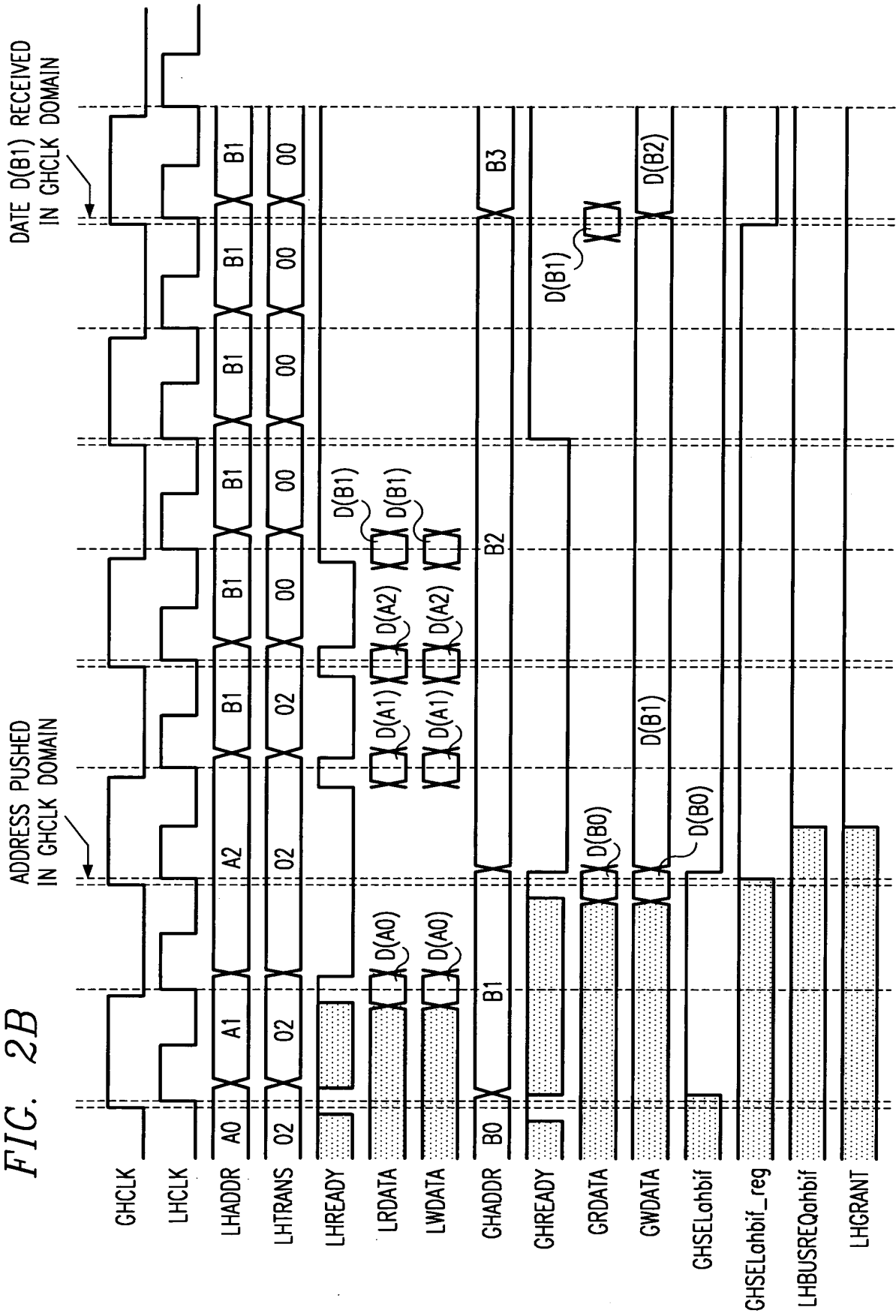
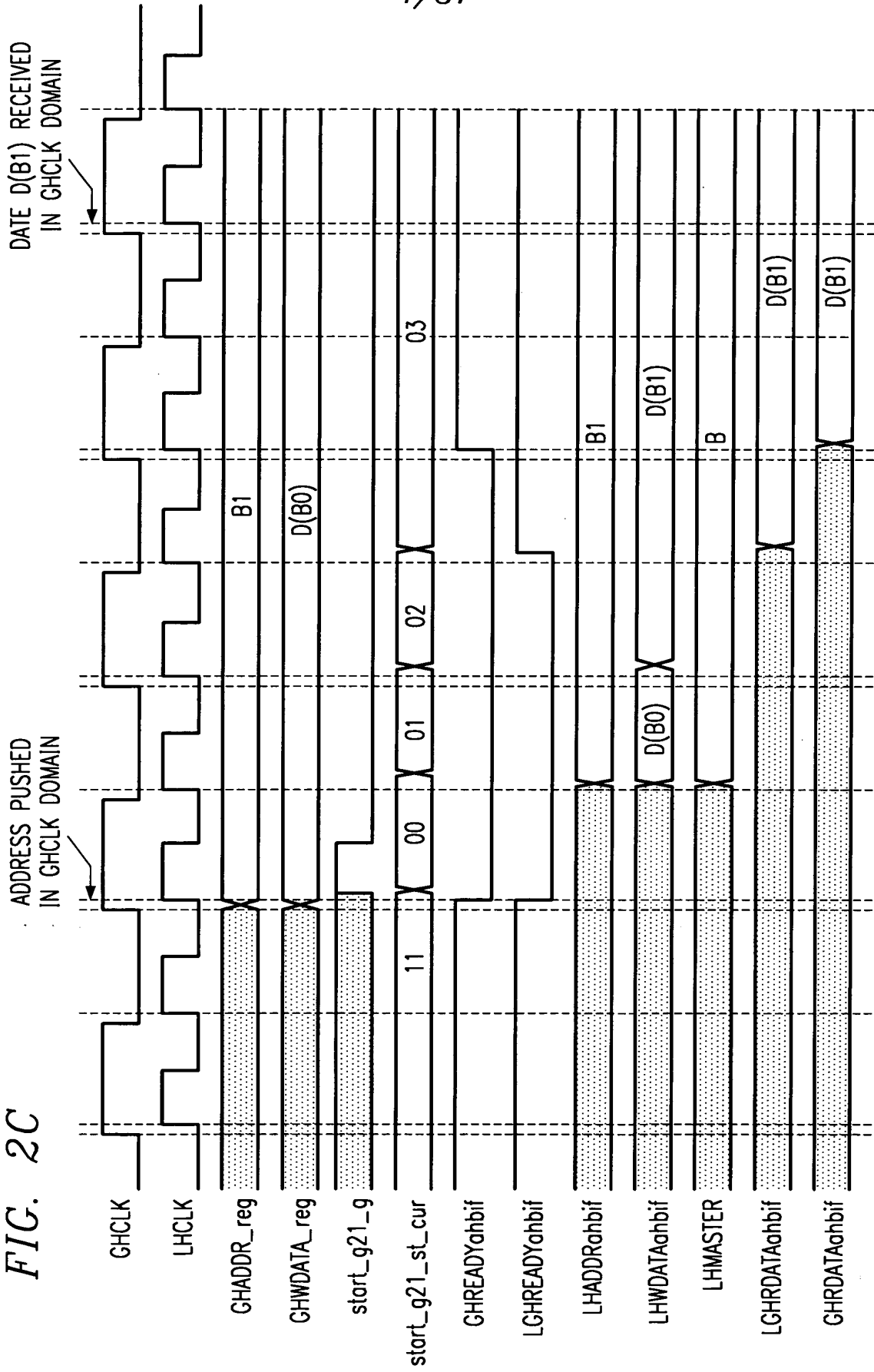
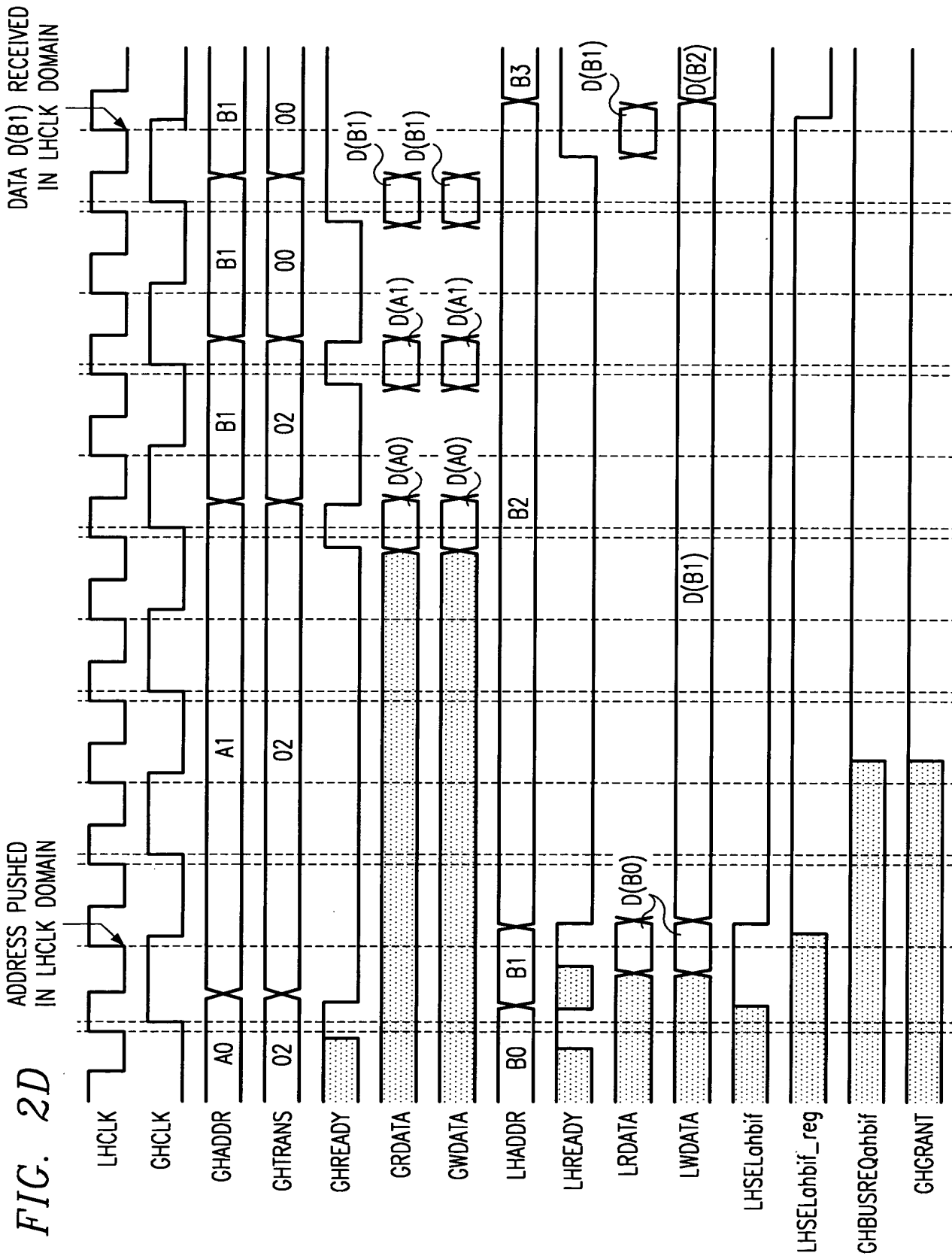


FIG. 2C





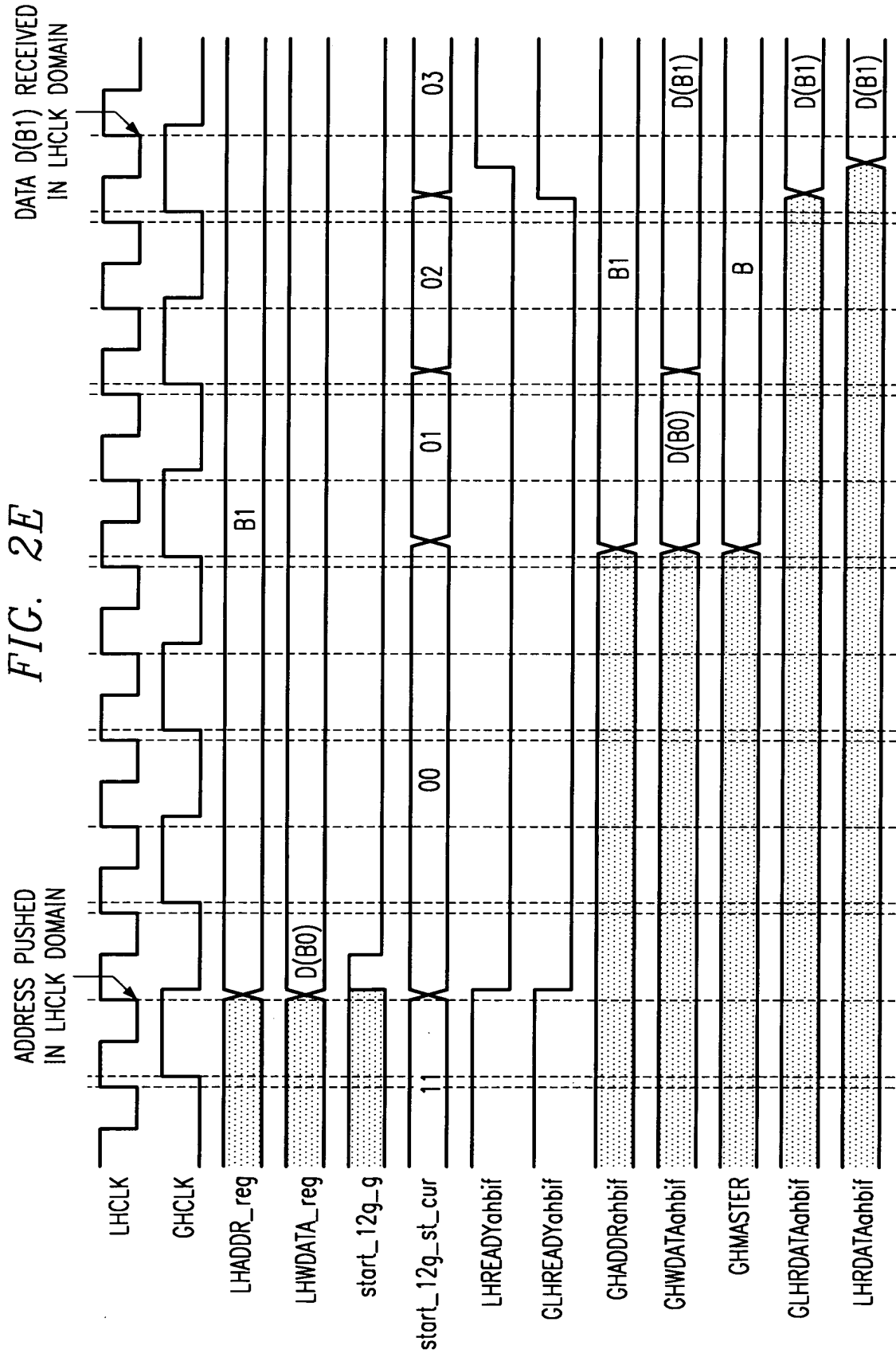


FIG. 4A

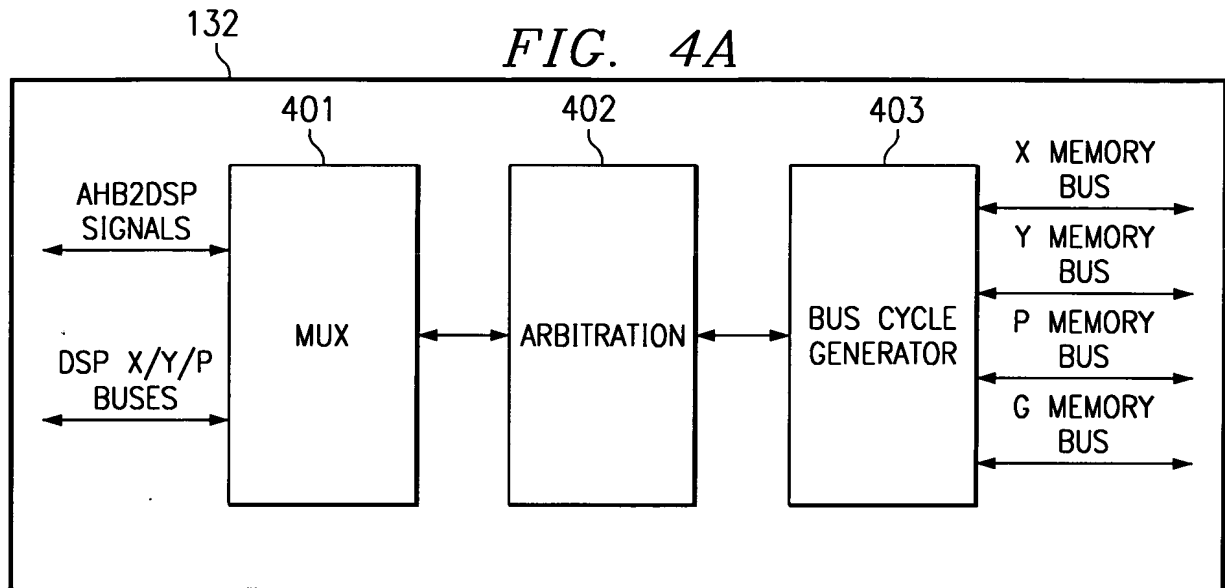
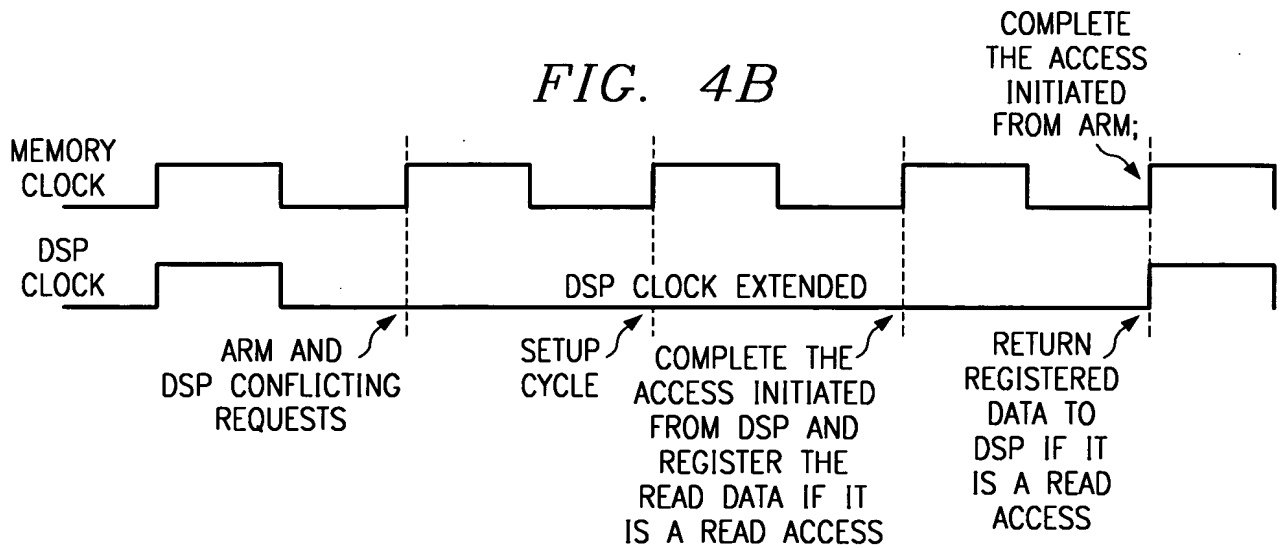
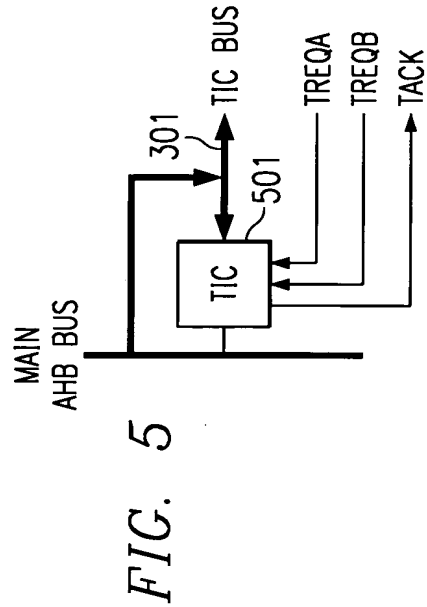
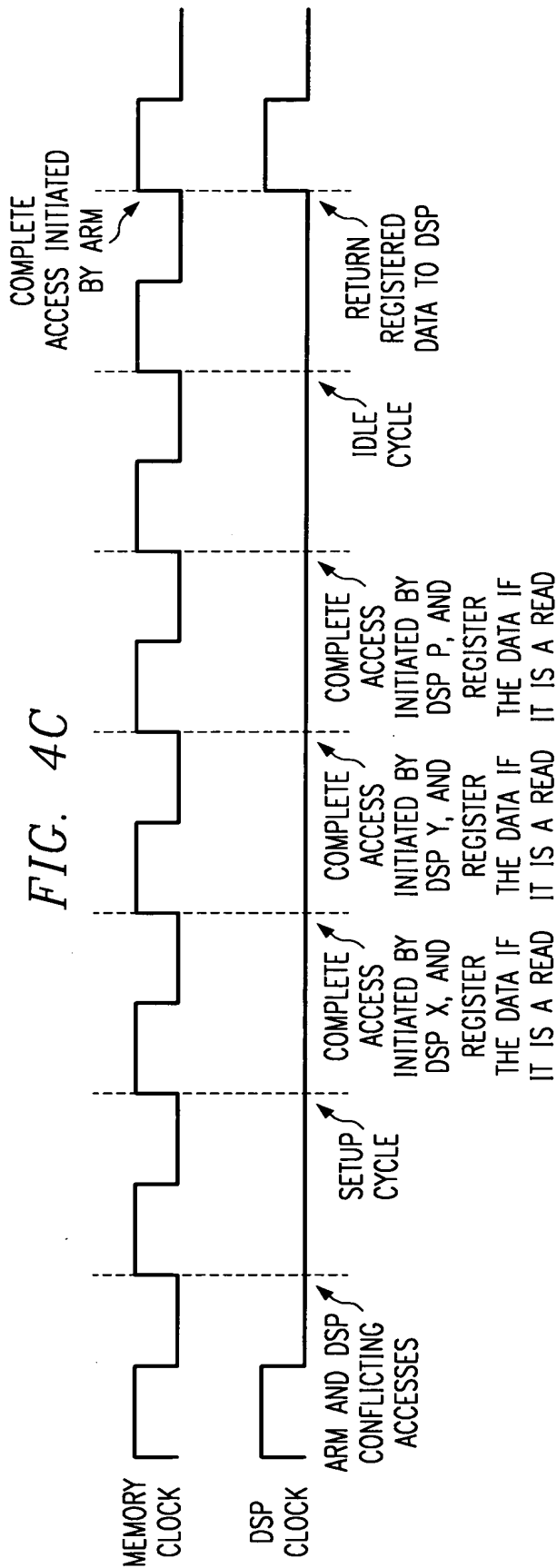


FIG. 4B





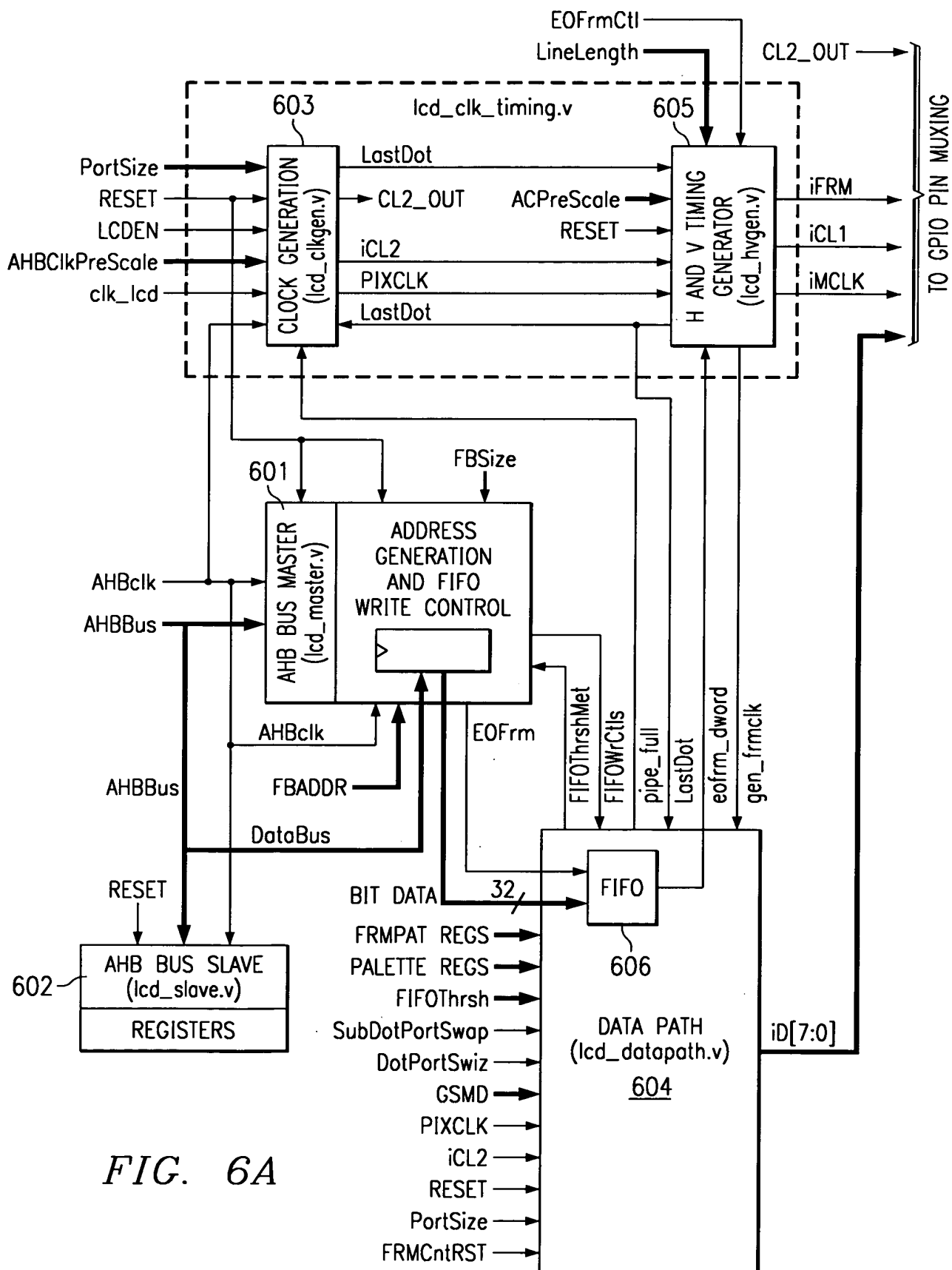


FIG. 6A

FIG. 6B

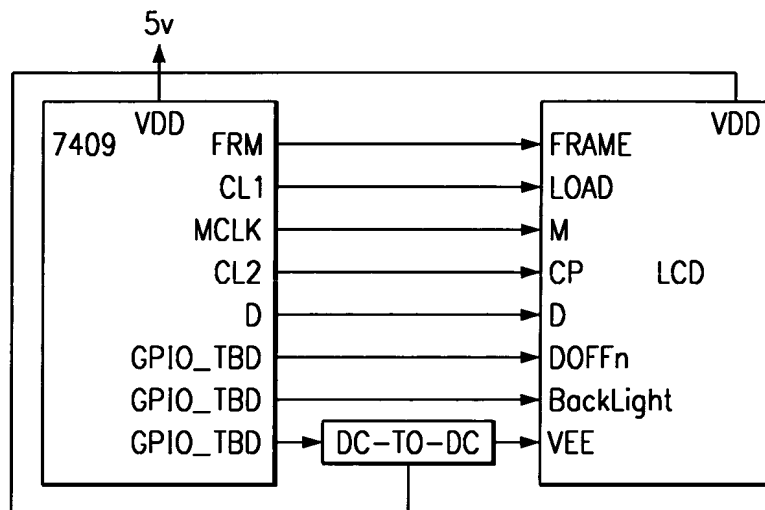
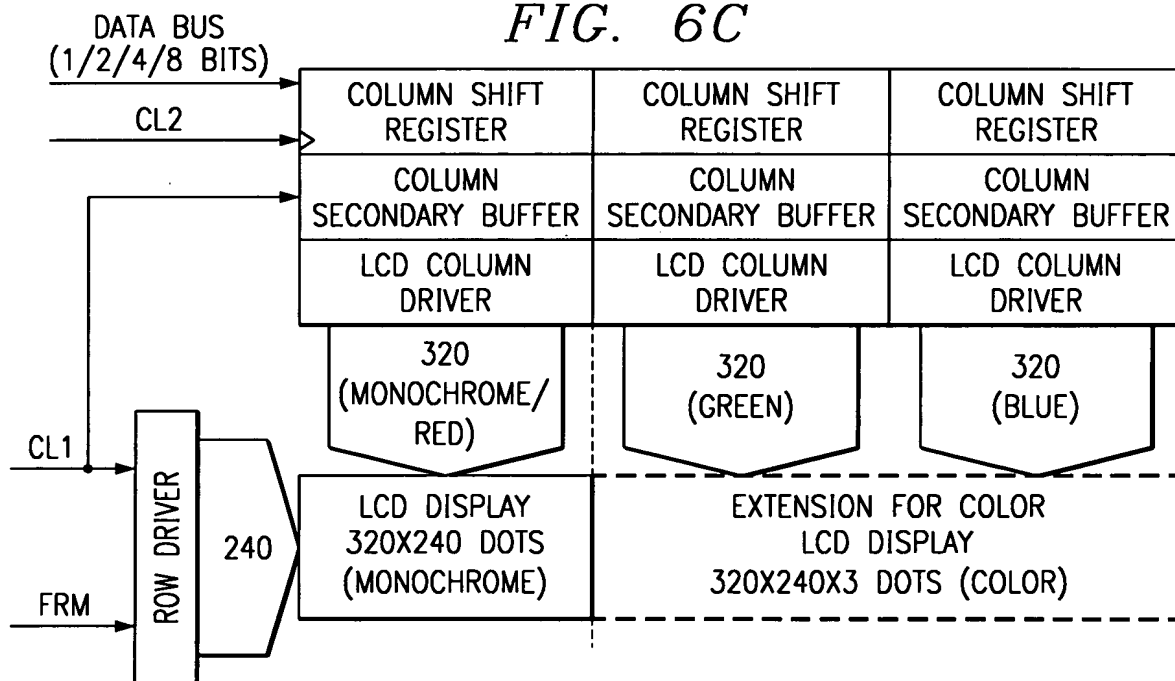
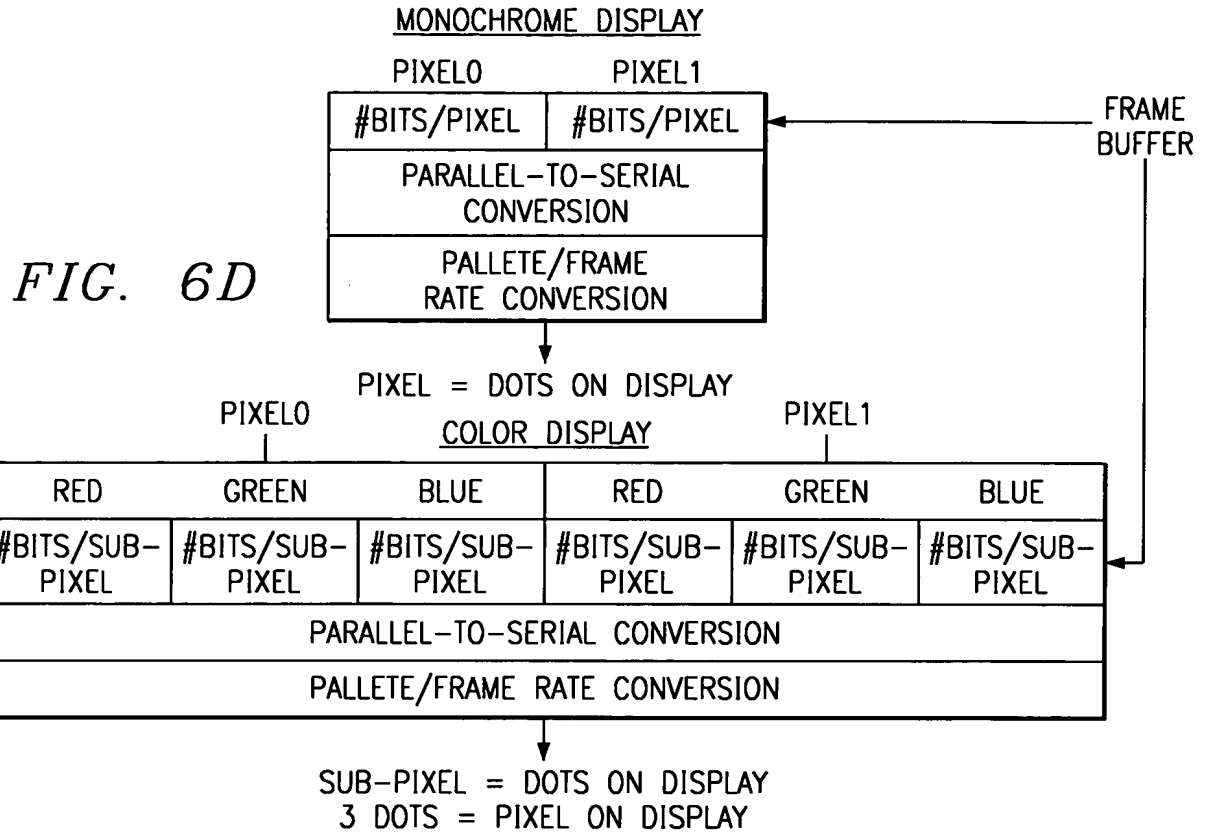
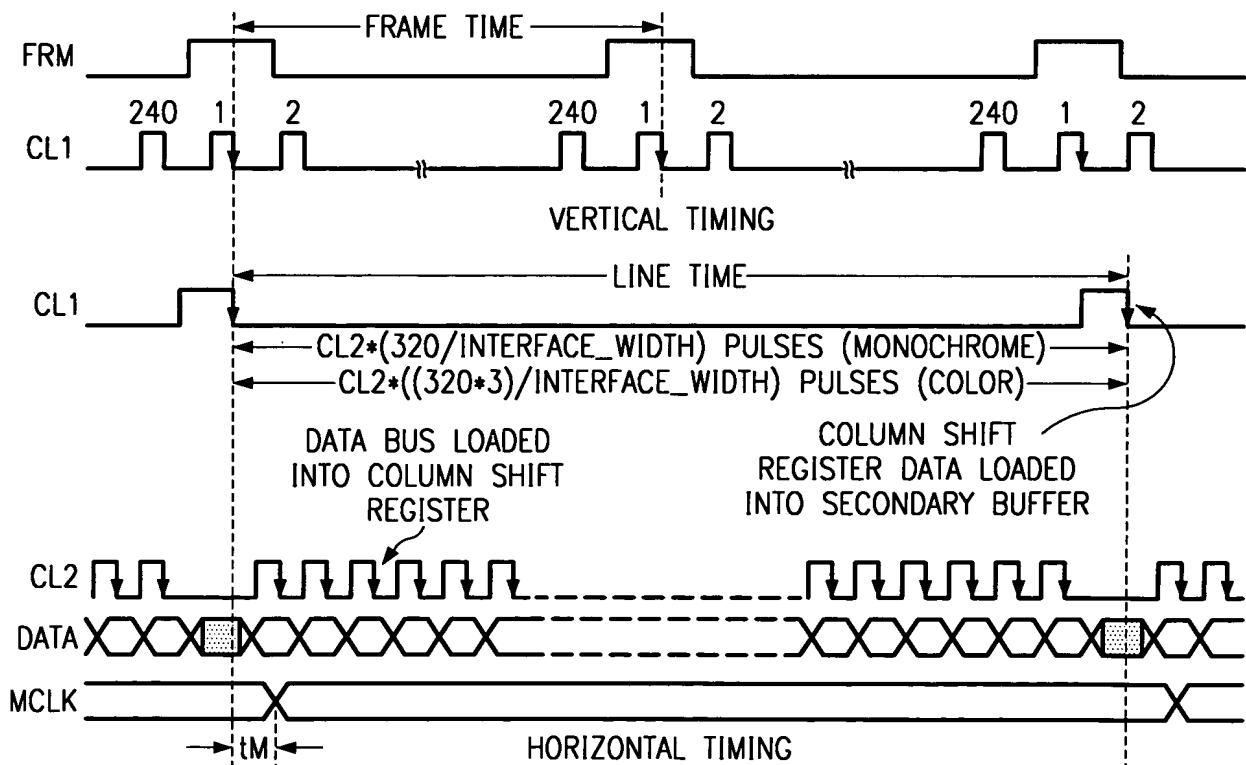


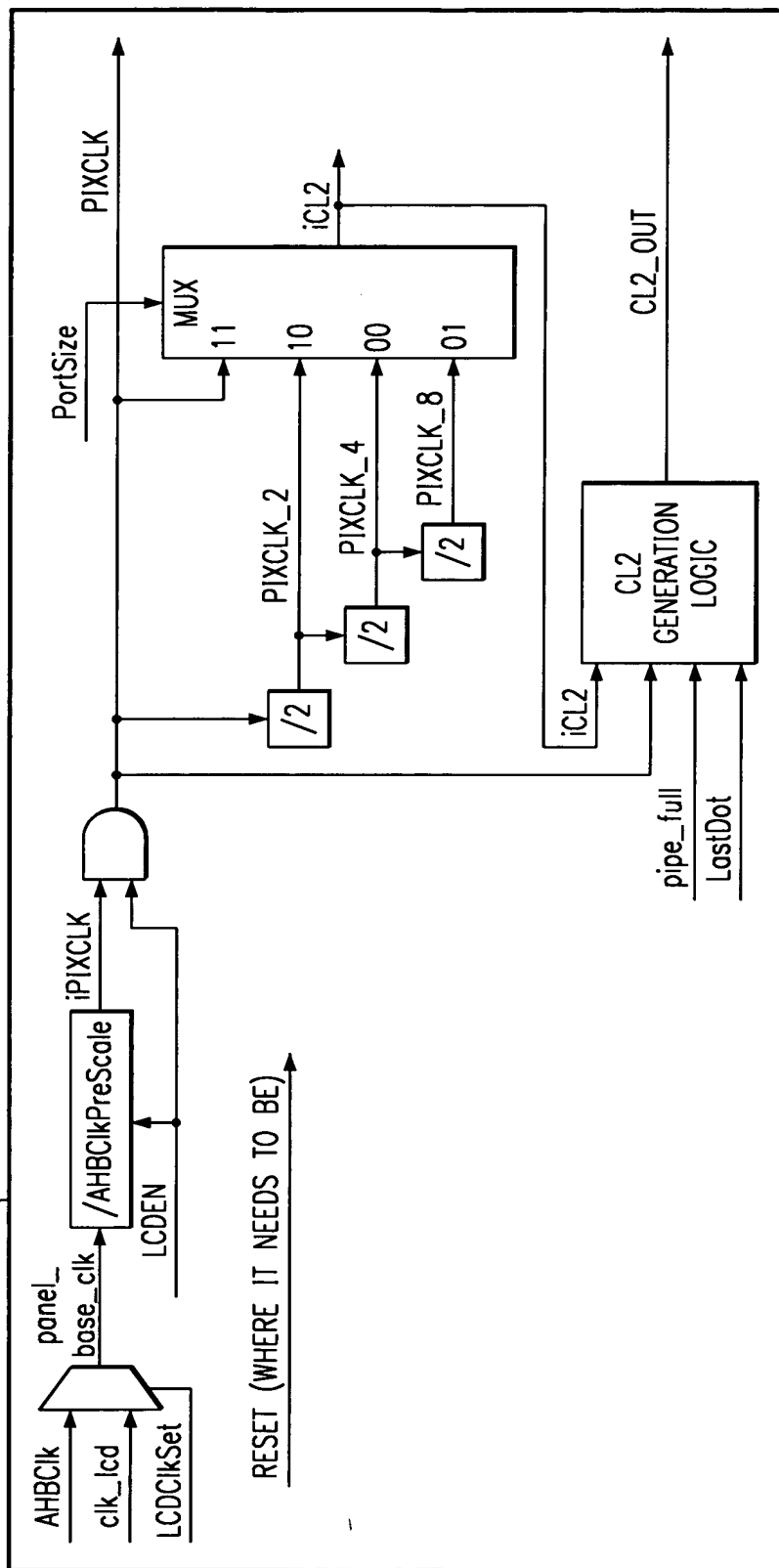
FIG. 6C



*FIG. 6E*

603

FIG. 6C



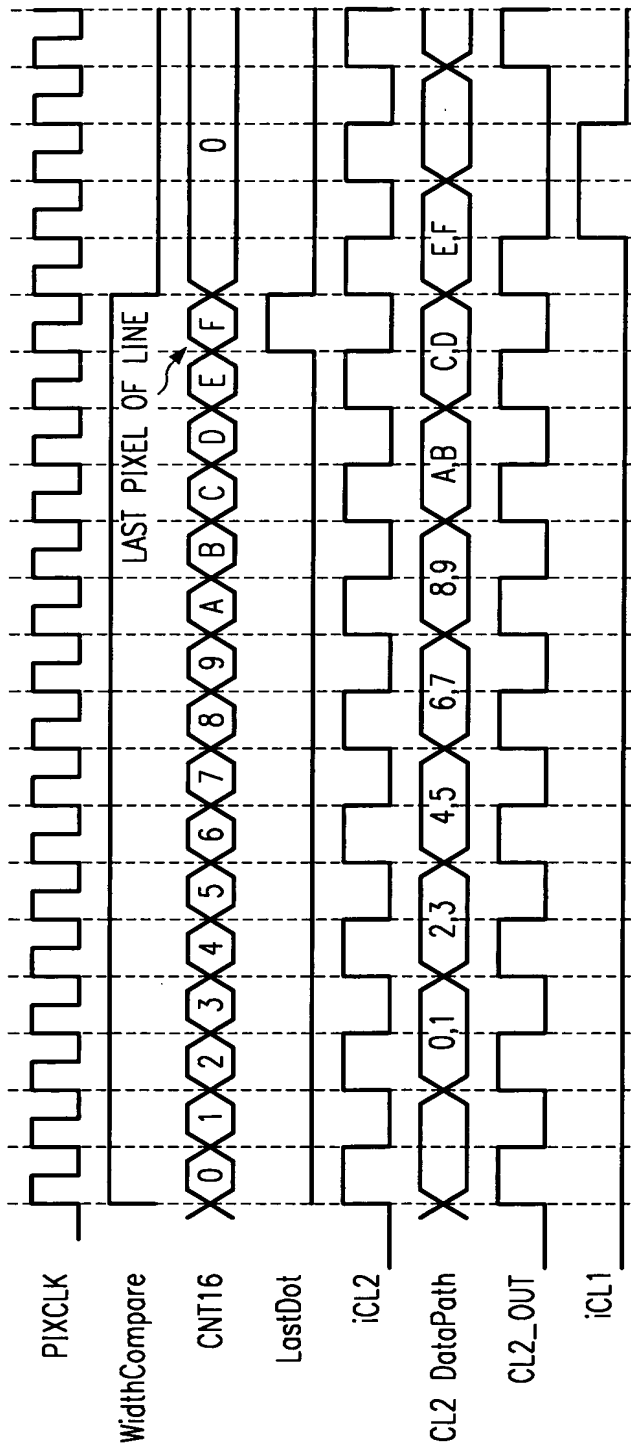


FIG. 6H

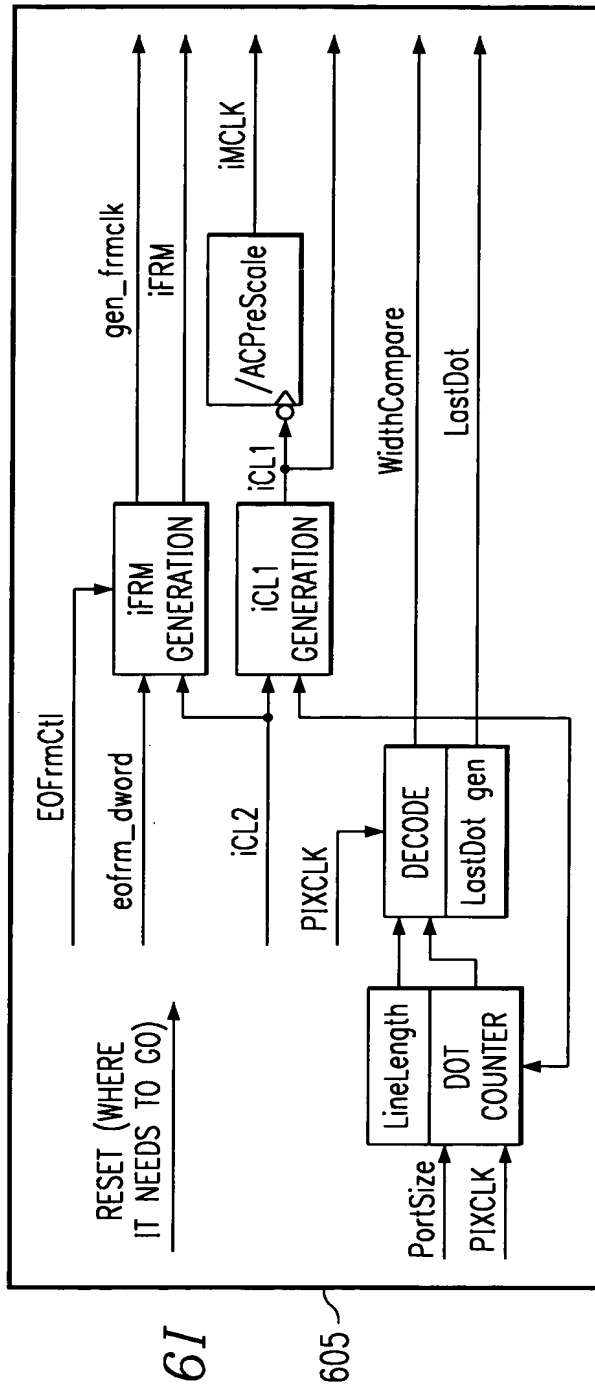


FIG. 6I

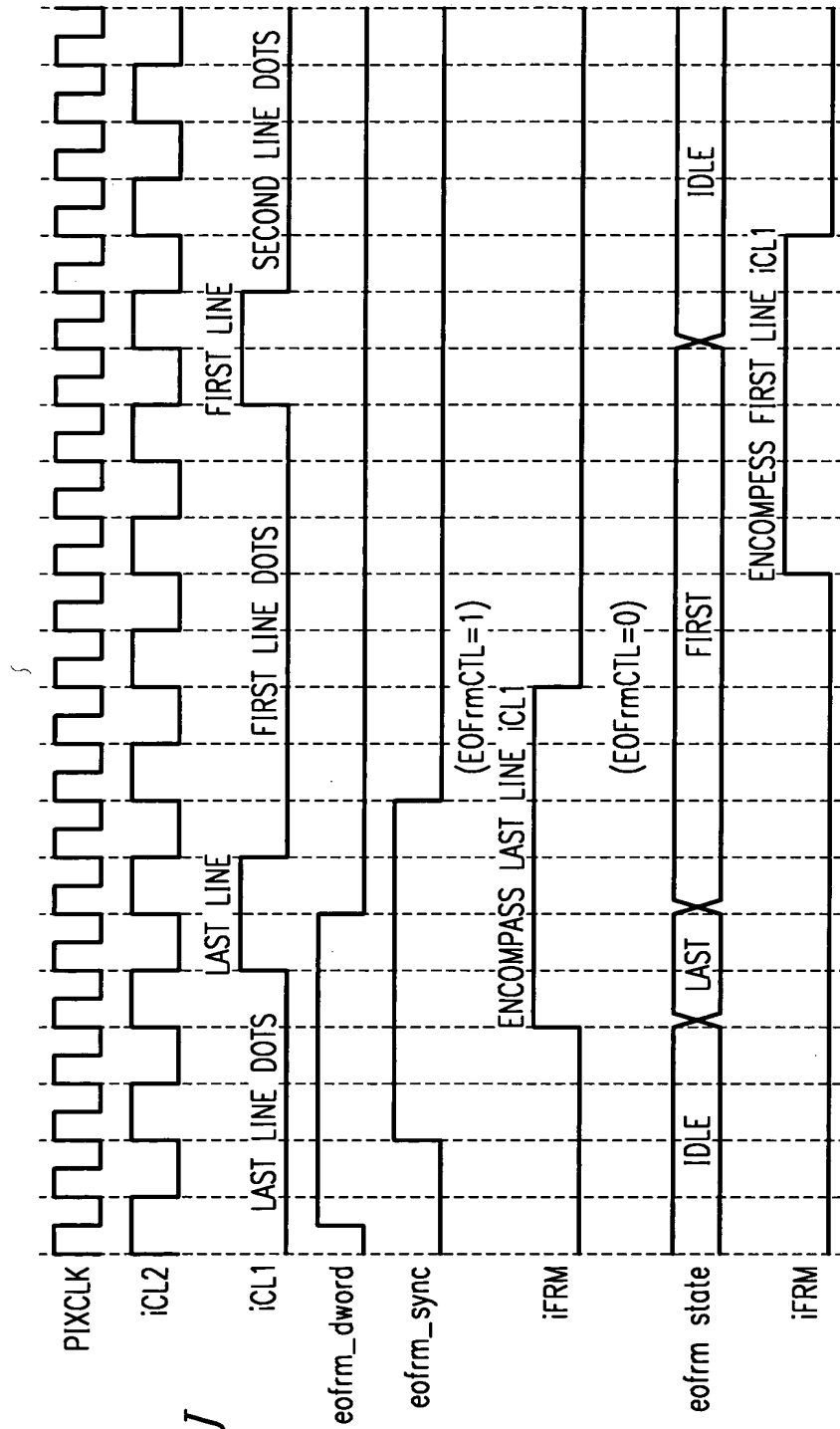


FIG. 6J

FIG. 6K

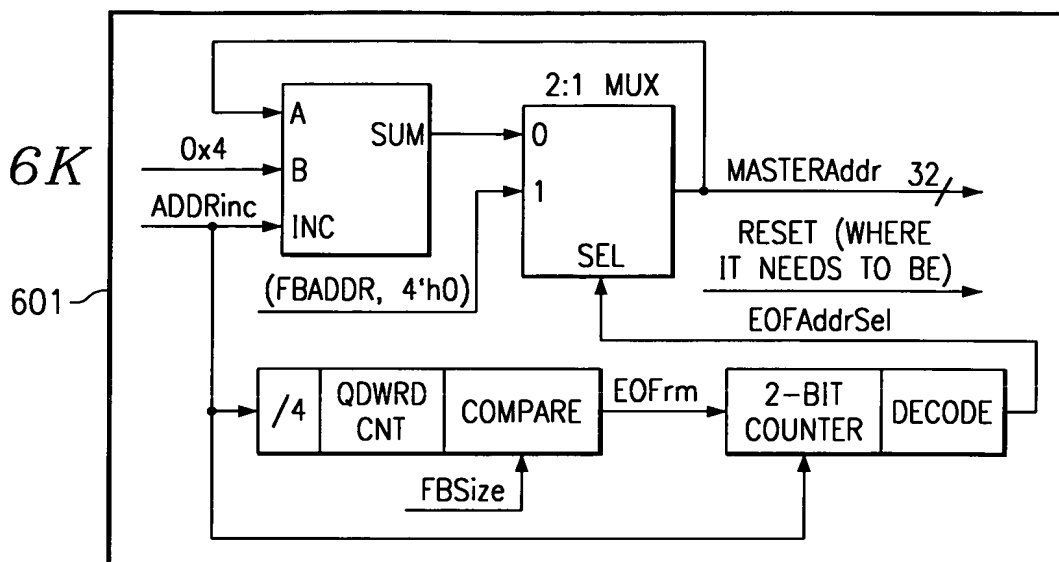


FIG. 17

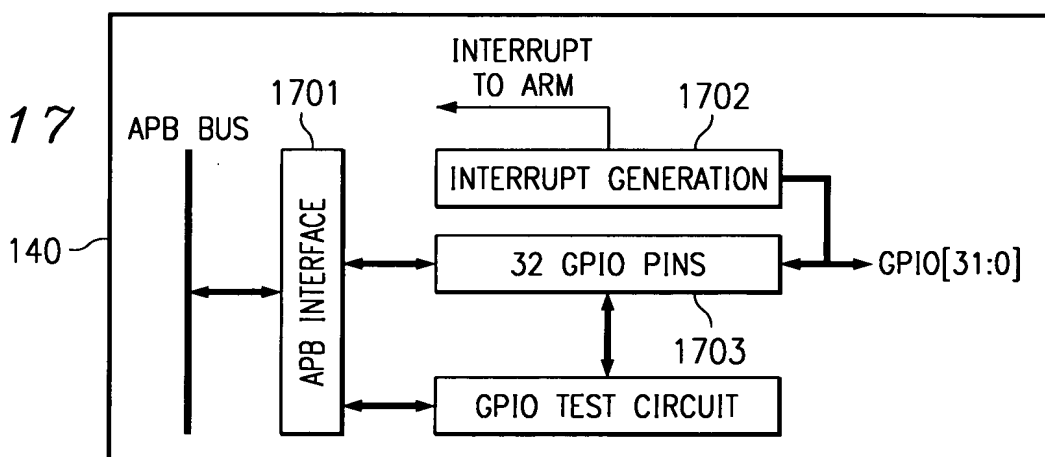
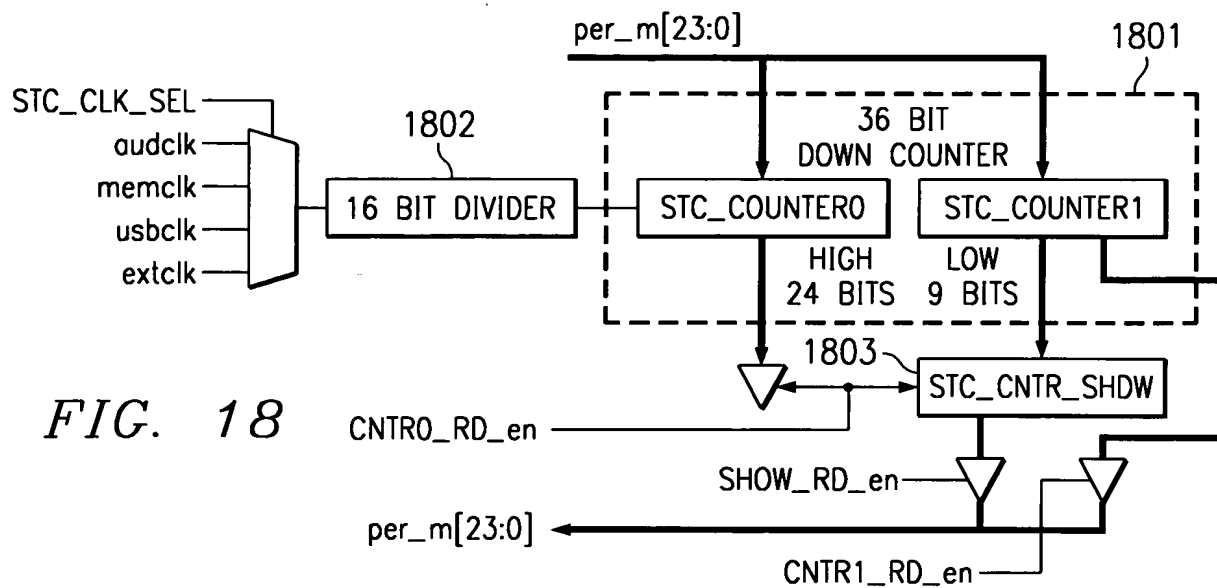


FIG. 18



CNTR0_RD_en

SHOW_RD_e

CNTR1_RD_en

4-BITS/PIXEL

FBADDR: 31.....031.....0

PIX8: [G R B G R B G R B G R B G R B G] [3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0]

PIX16: [G R B G R B G R B G R B G R B G] [3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0]

PIX9: [G R B G R B G R B G R B G R B G] [3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0]

PIX: [B G R B G R B G R B G R B G R B] [3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0][3:0]

NEXT LINE ADDRESS = FBADDR + ((LineLength*16)*(bite/pixel))/8 (LineLength*16) - 7

2-BITS/PIXEL

FBADDR: 31.....031.....0

PIX16: [R B G R B G R B G R B G R B G R] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

PIX1: [R B G R B G R B G R B G R B G R] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

PIX: [B G R B G R B G R B G R B G R B] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

NEXT LINE ADDRESS = FBADDR + ((LineLength*16)*(bite/pixel))/8

1-BIT/PIXEL

FBADDR: 31.....031.....0

PIX32: [R B G R B G R B G R B G R B G R] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

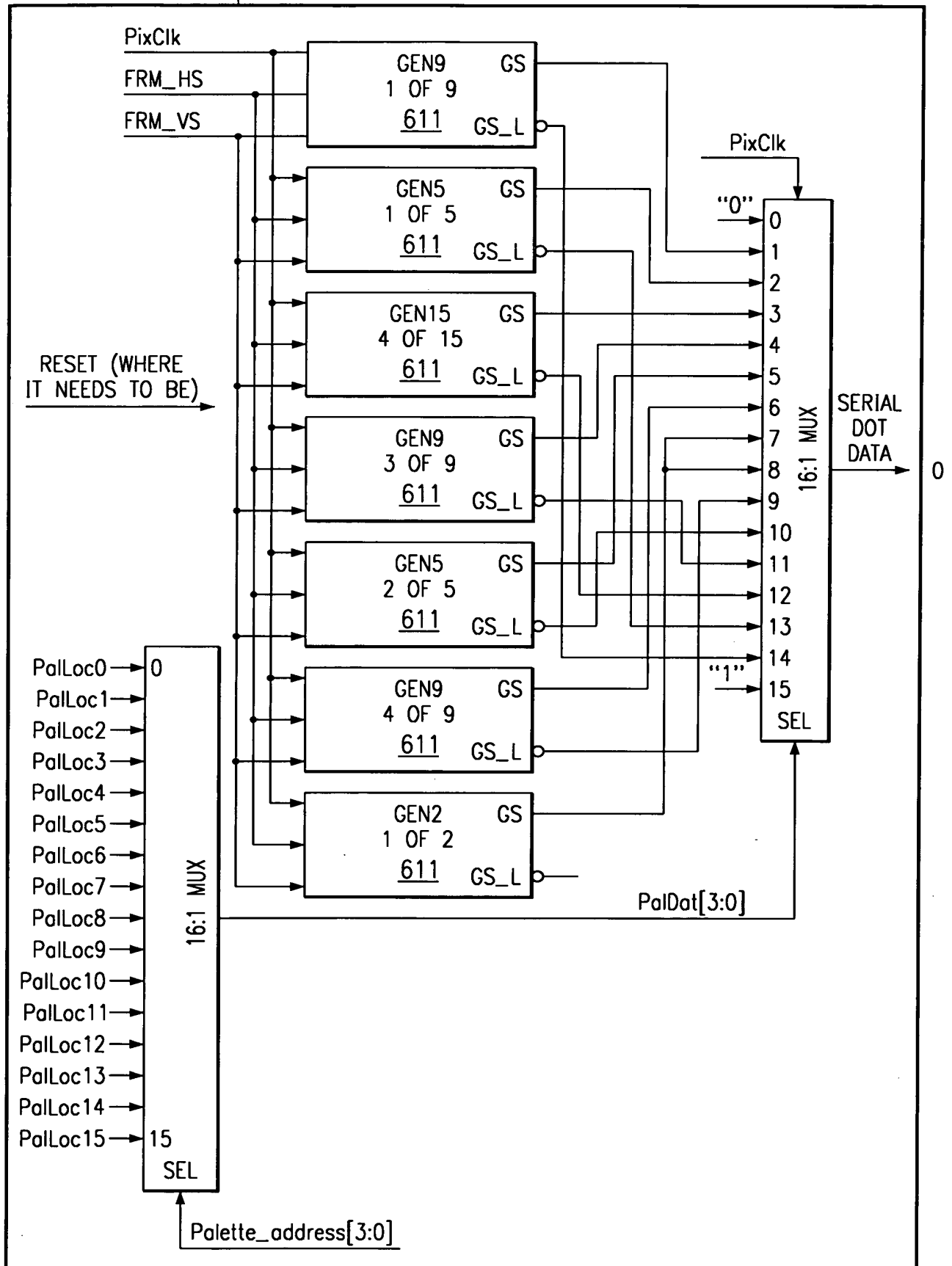
PIX1: [R B G R B G R B G R B G R B G R] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

PIX33: [R B G R B G R B G R B G R B G R] [1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0][1:0]

NEXT LINE ADDRESS = FBADDR + ((LineLength*16)*(bite/pixel))/8

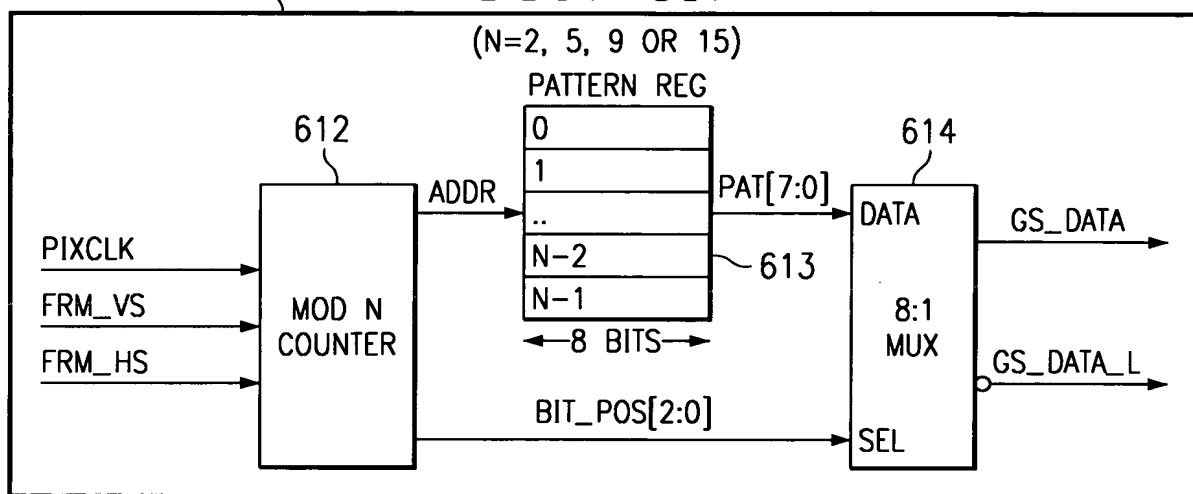
FIG. 6M

609



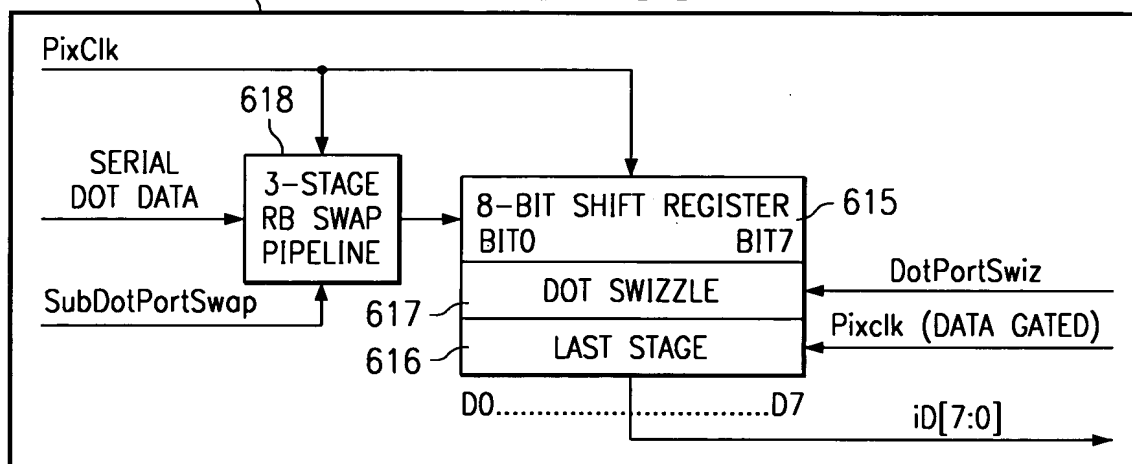
611

FIG. 6N



609

FIG. 6O



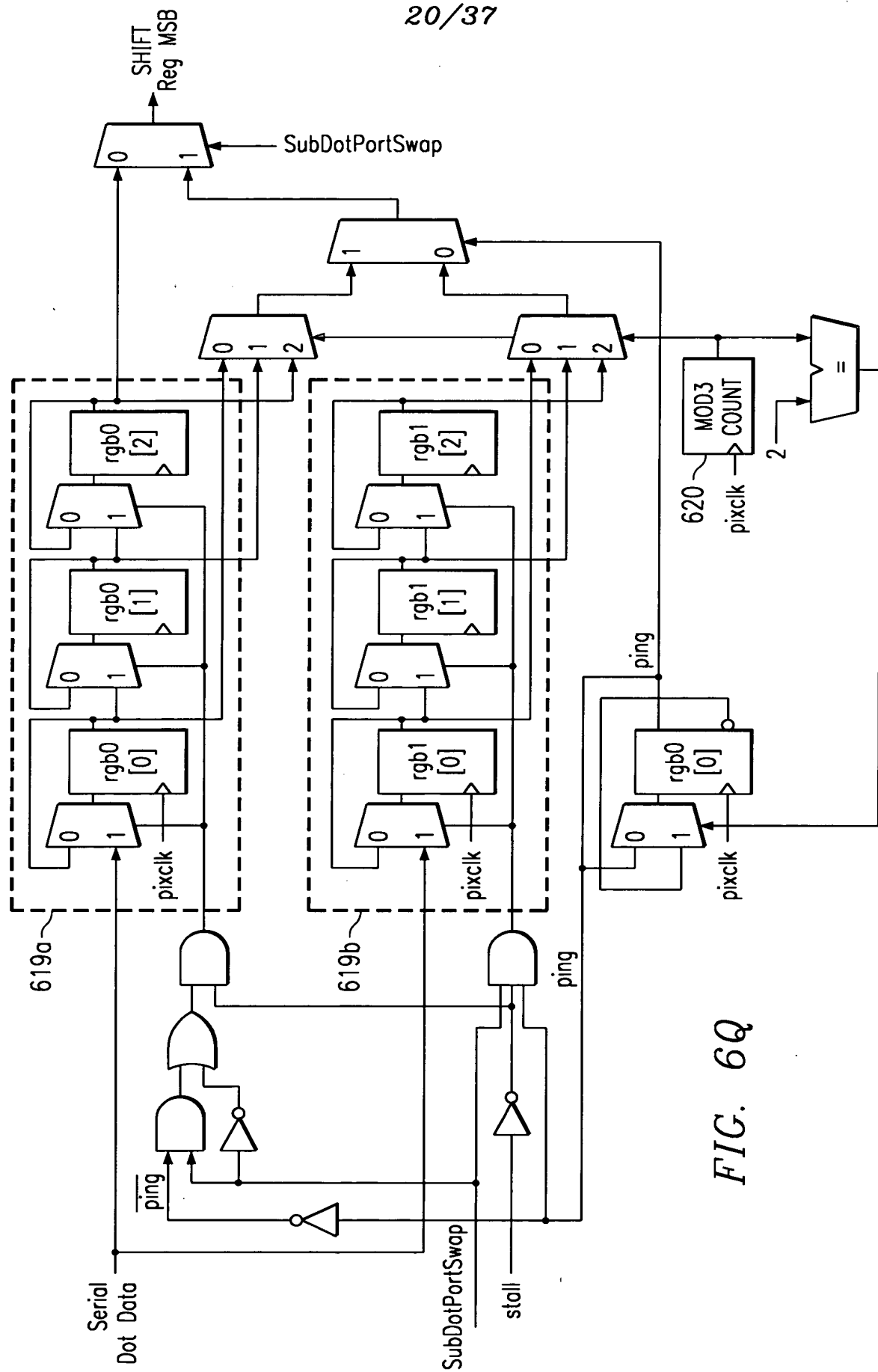
TIME (FROM THE SHIFT REGISTER POINT OF VIEW)

FIG. 6P

SubDotPortSwap=0

{BnGnRn}.....{B3G3R3}{B2G2R2}{B1G1R1}{B0G0R0}

SubDotPortSwap=1



SECRET

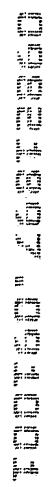
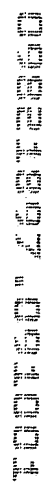
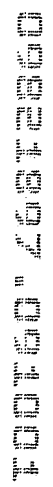
[illegible][illegible]

FIG. 7B

22/37

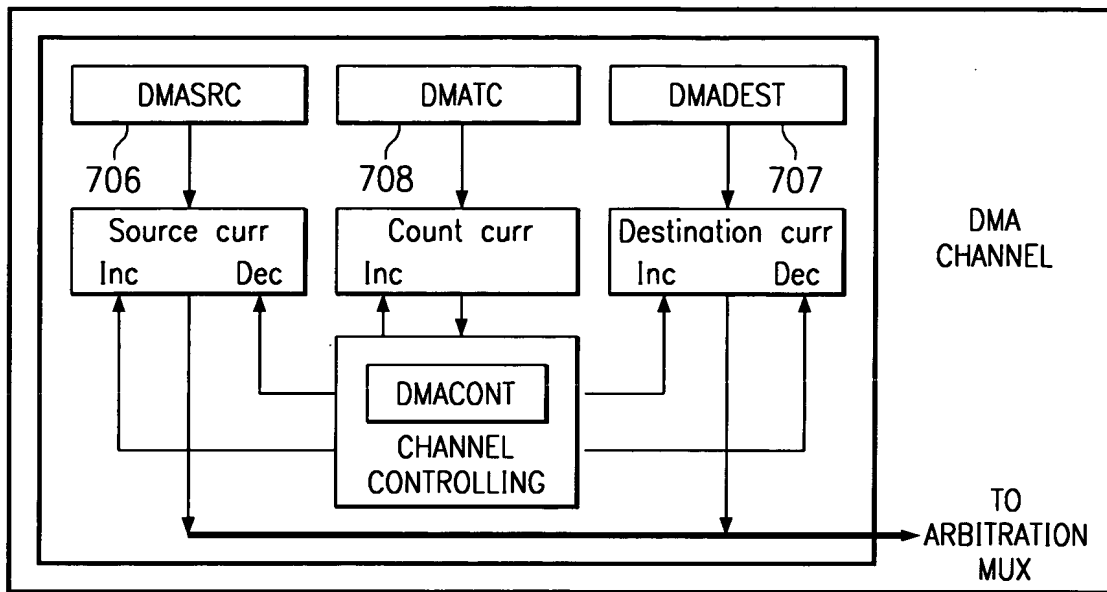
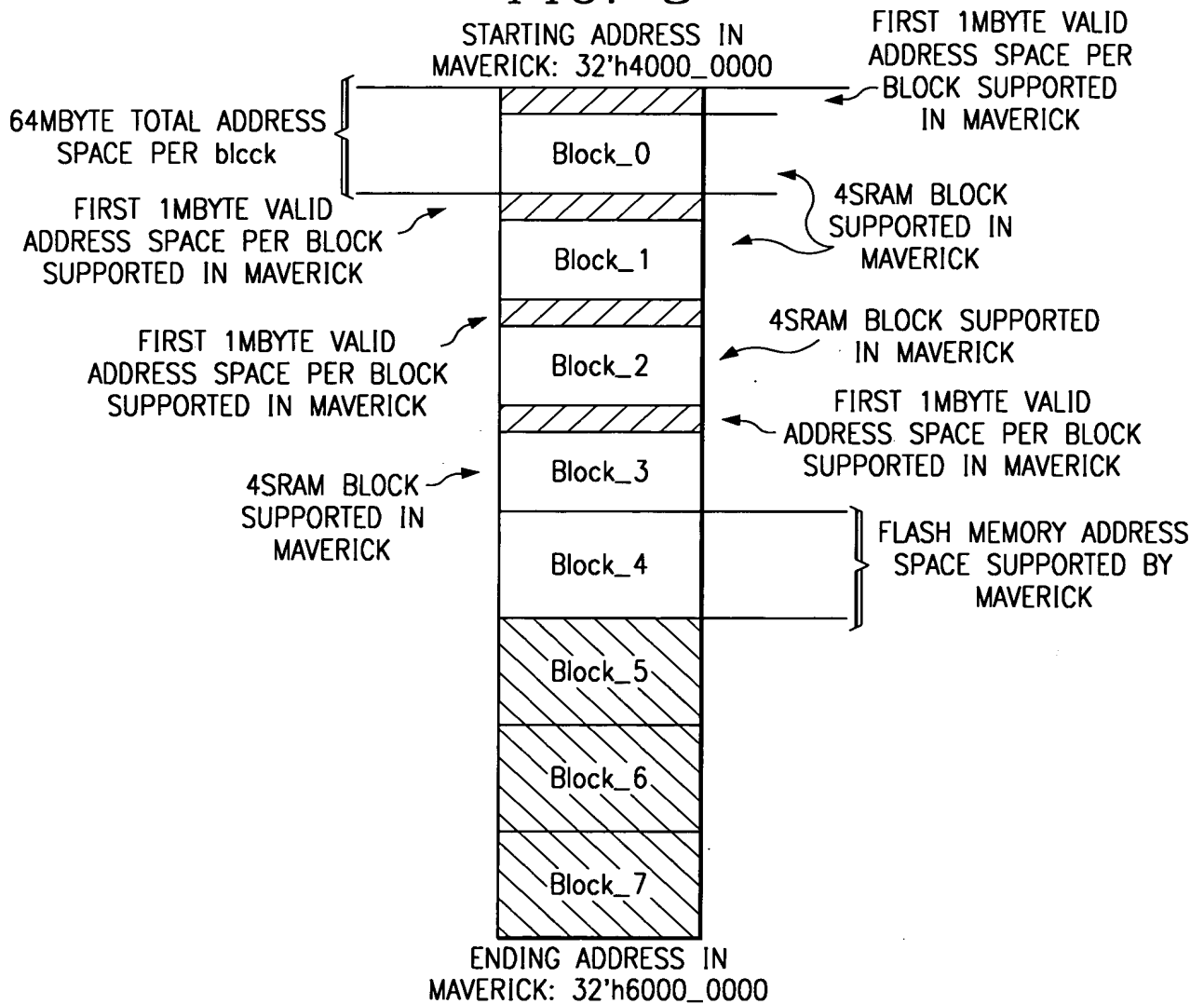


FIG. 8



00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

126

FIG. 9

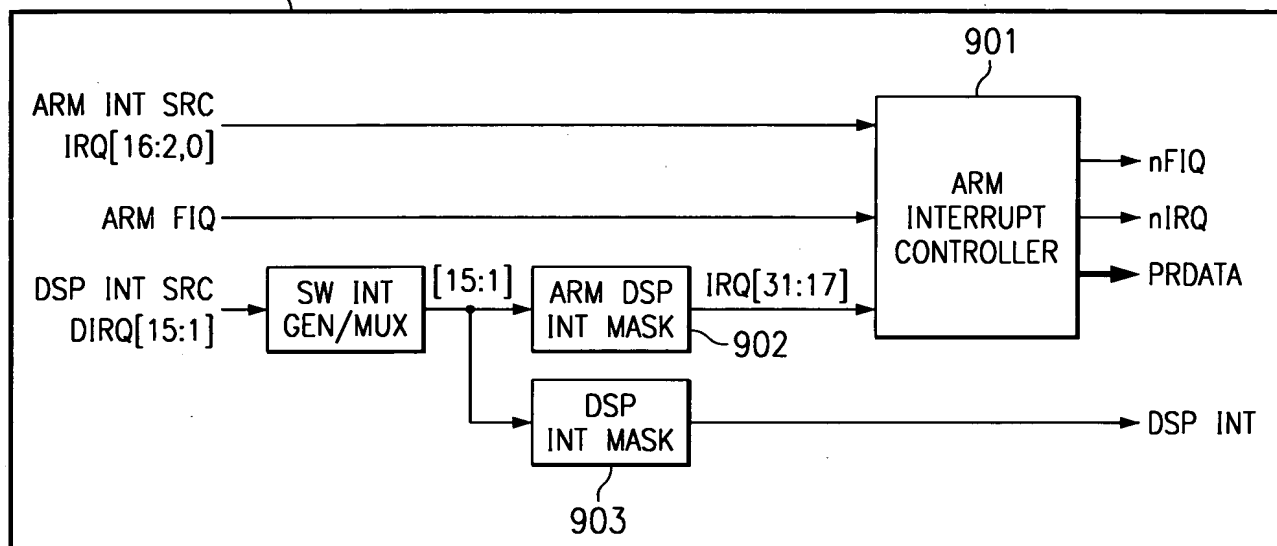
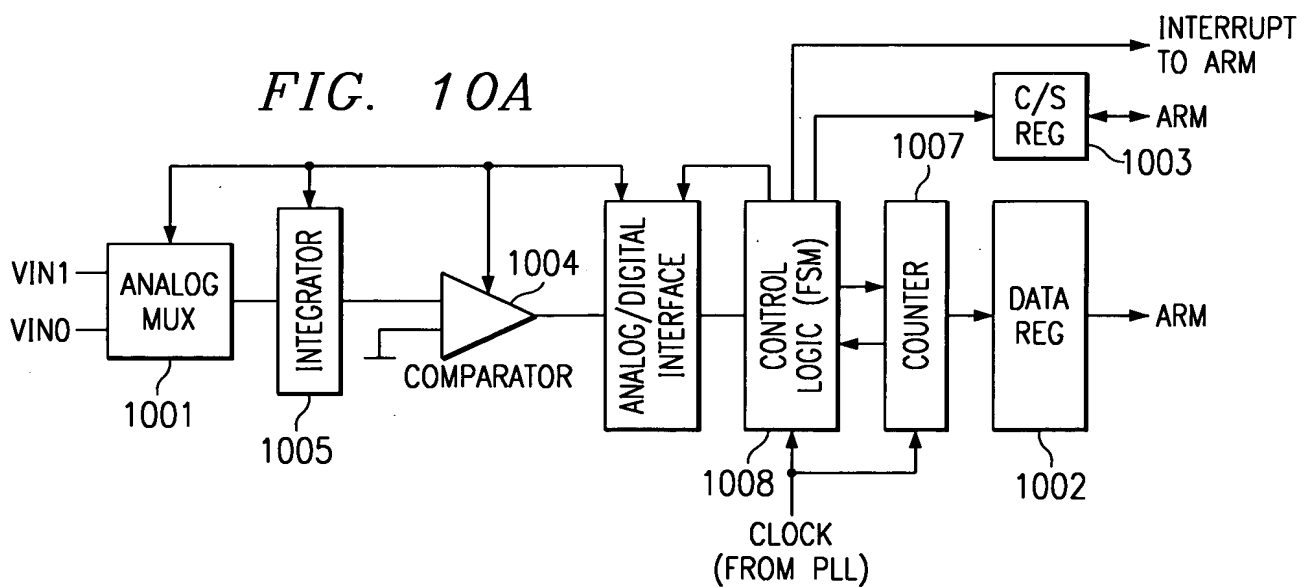


FIG. 10A



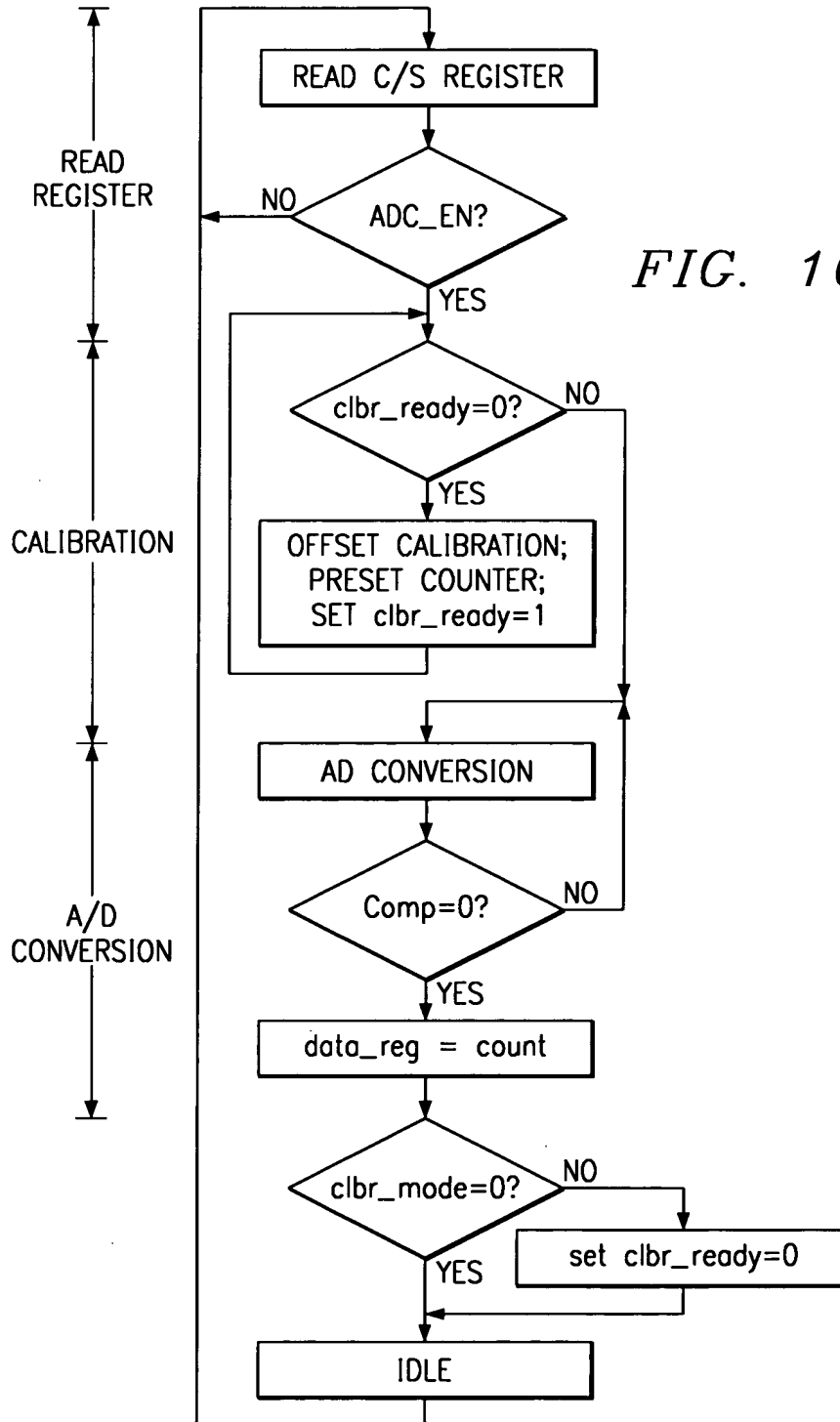


FIG. 11A

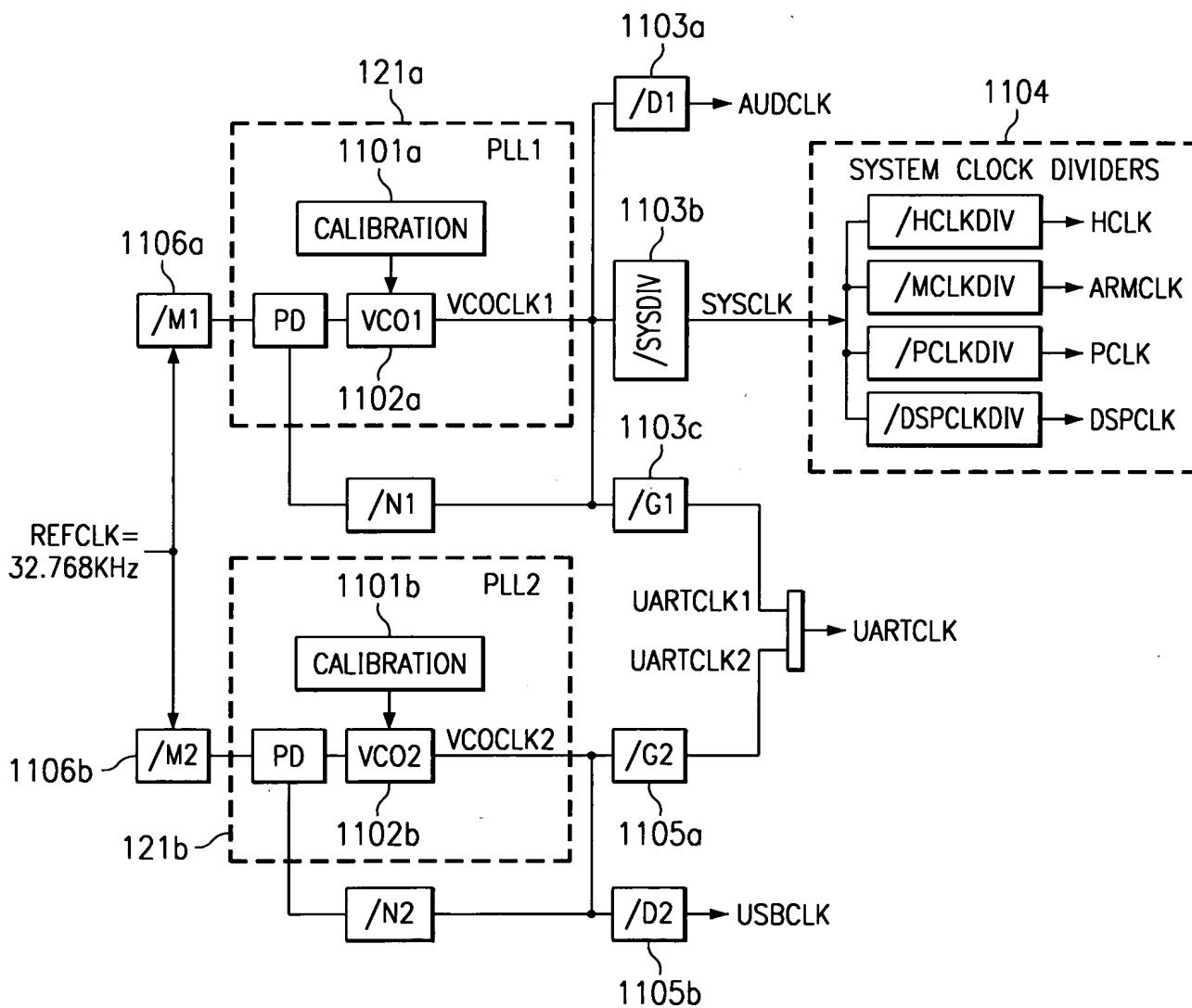


FIG. 11B

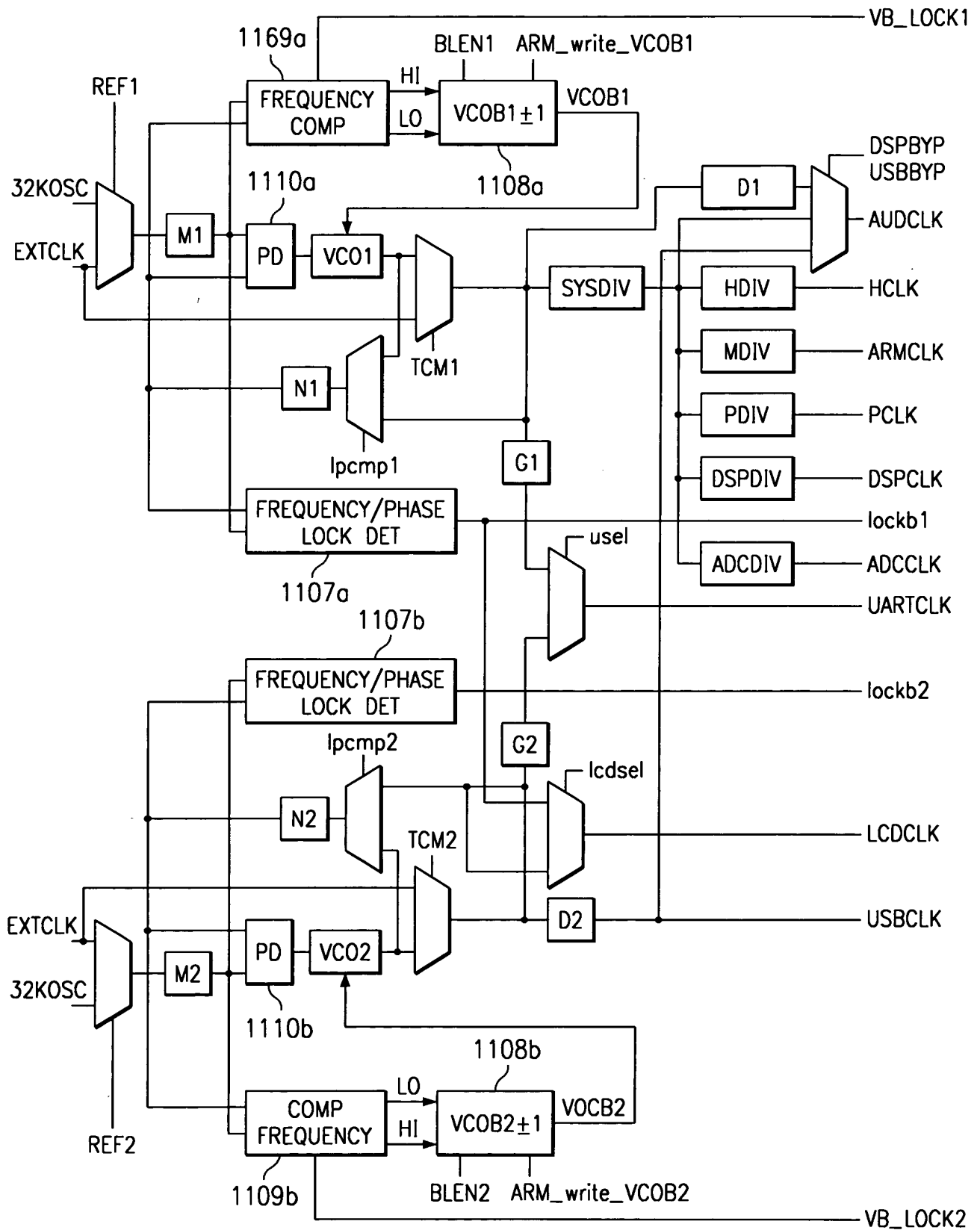


FIG. 11C

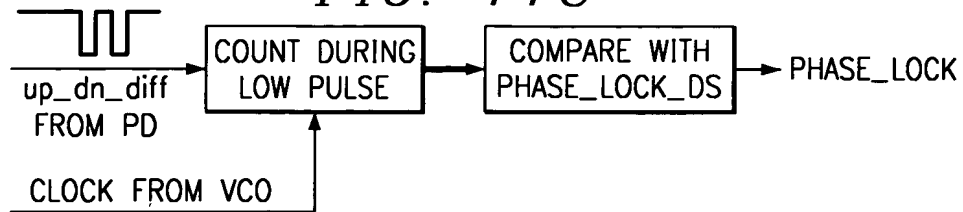


FIG. 11D

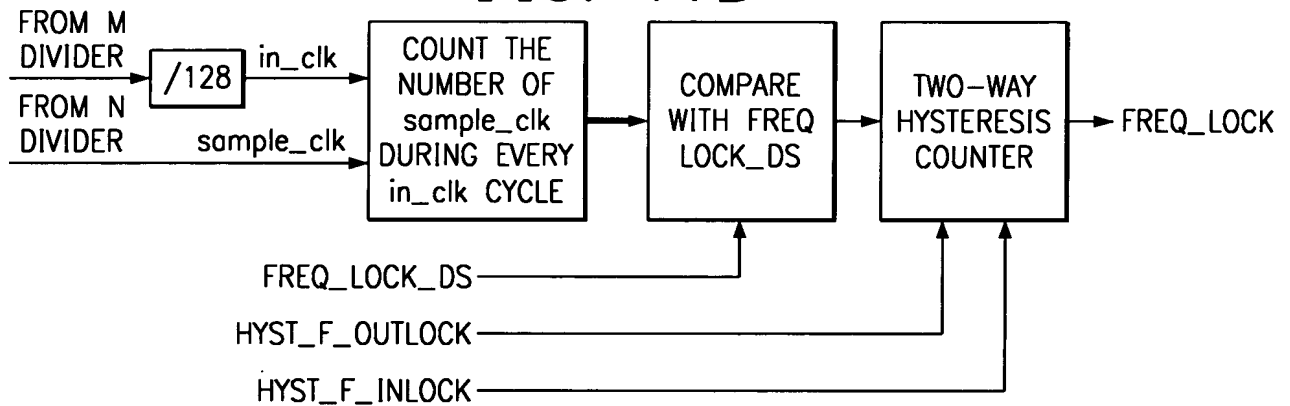


FIG. 12A

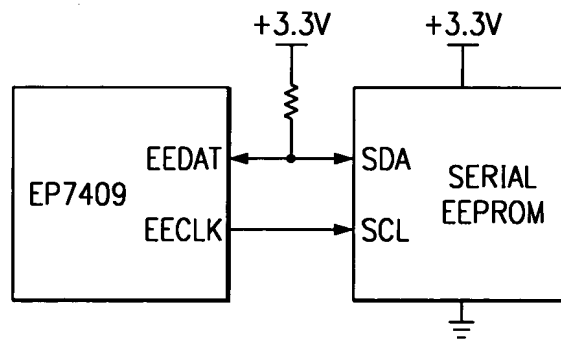
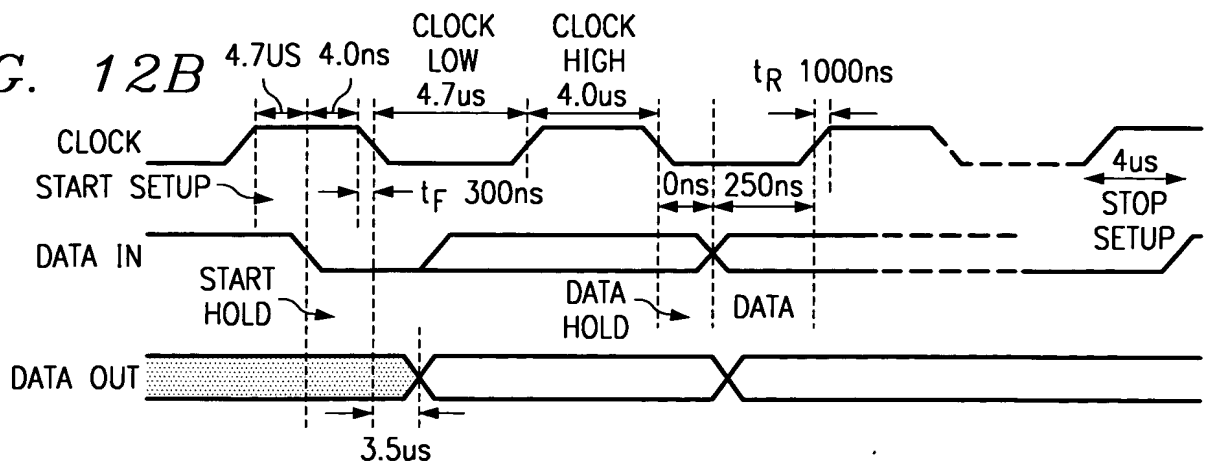


FIG. 12B



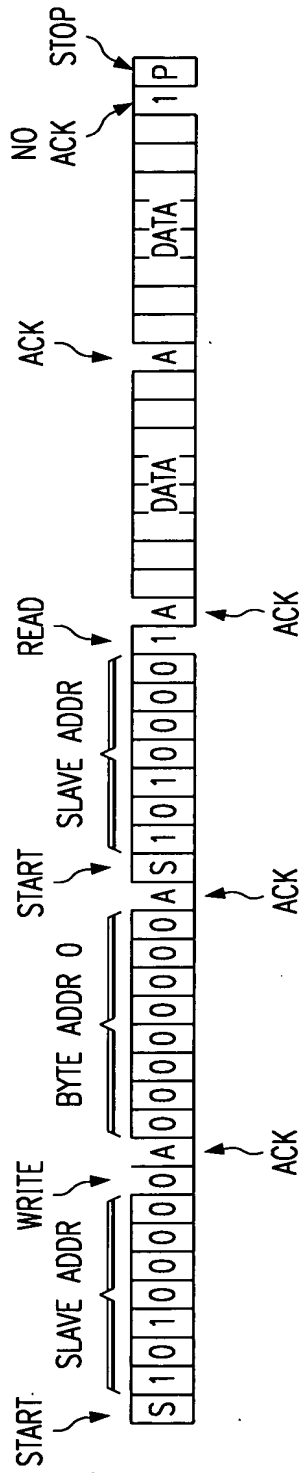
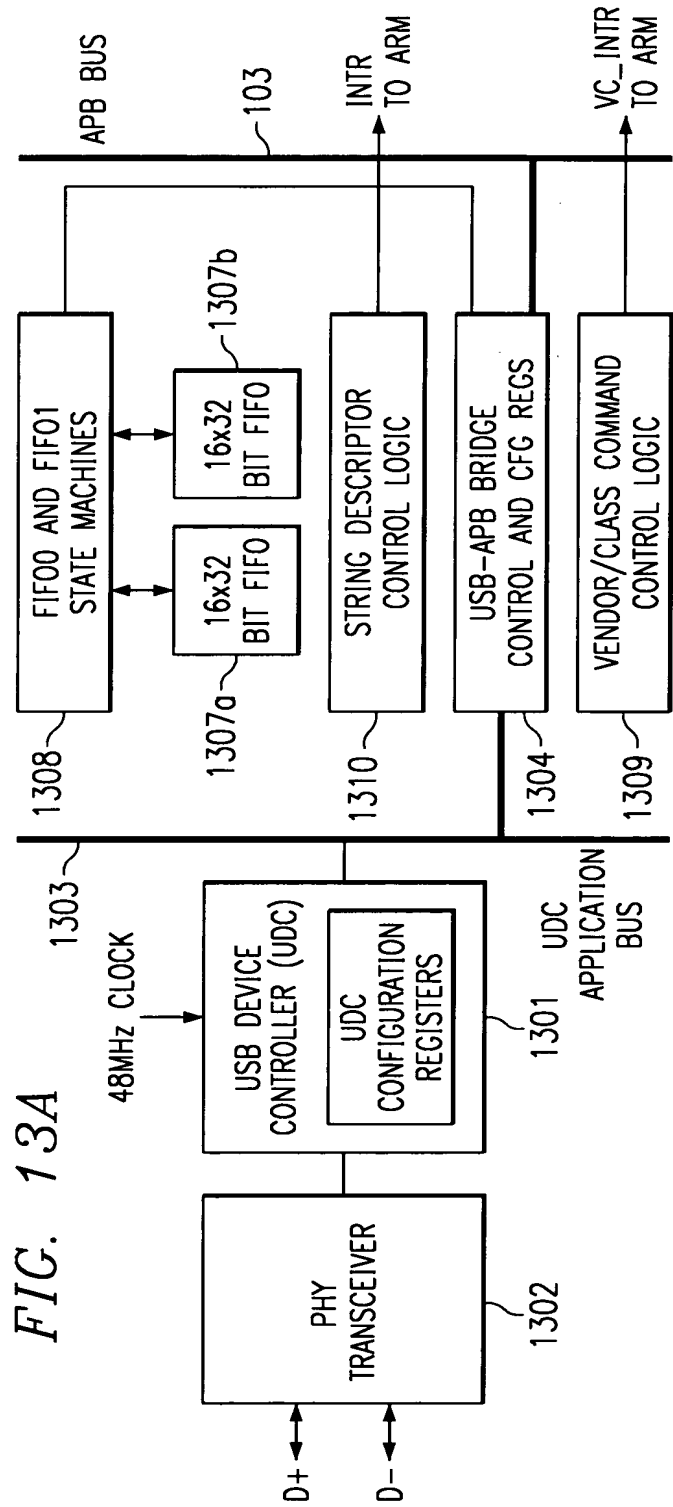


FIG. 12C

FIG. 13A



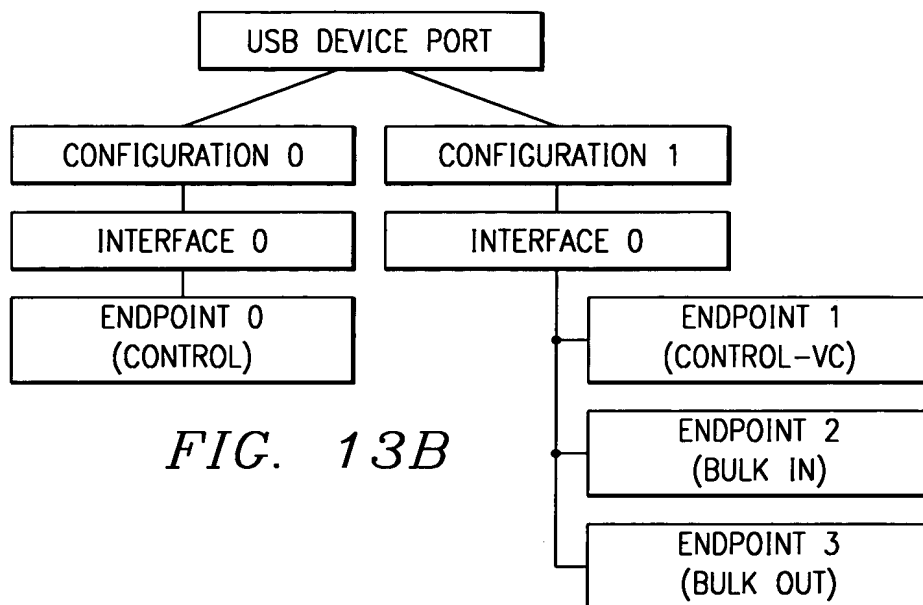


FIG. 13B

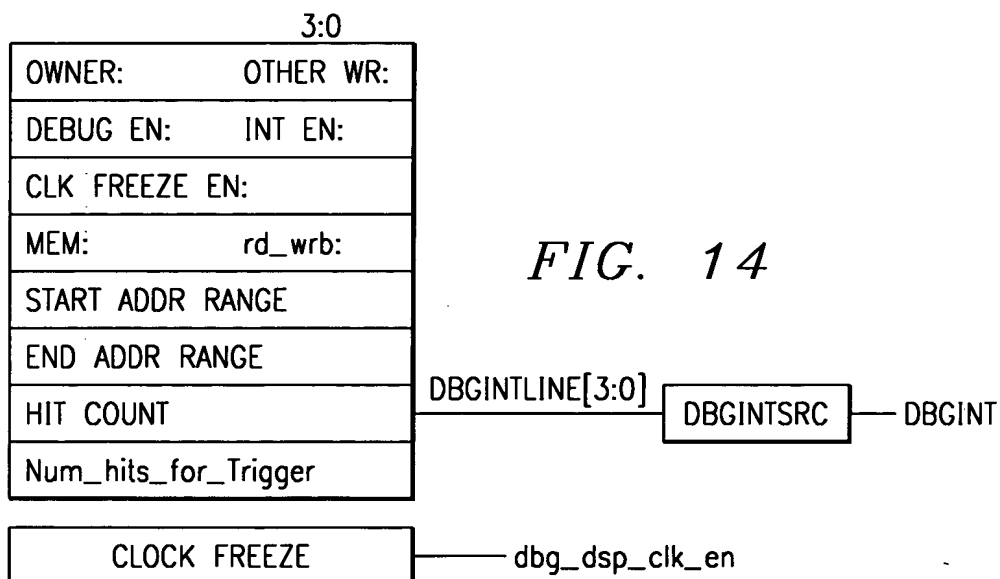


FIG. 14

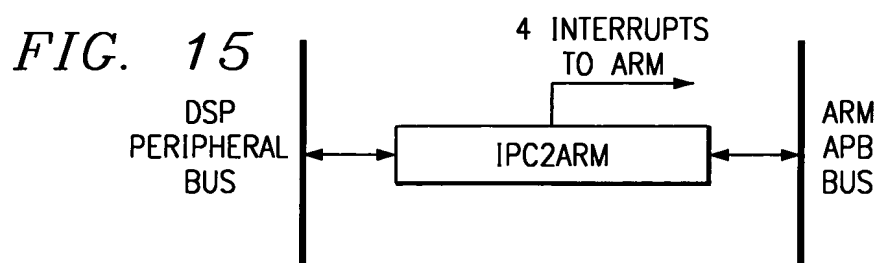


FIG. 15

T00T60" 208T2860

FIG. 16A

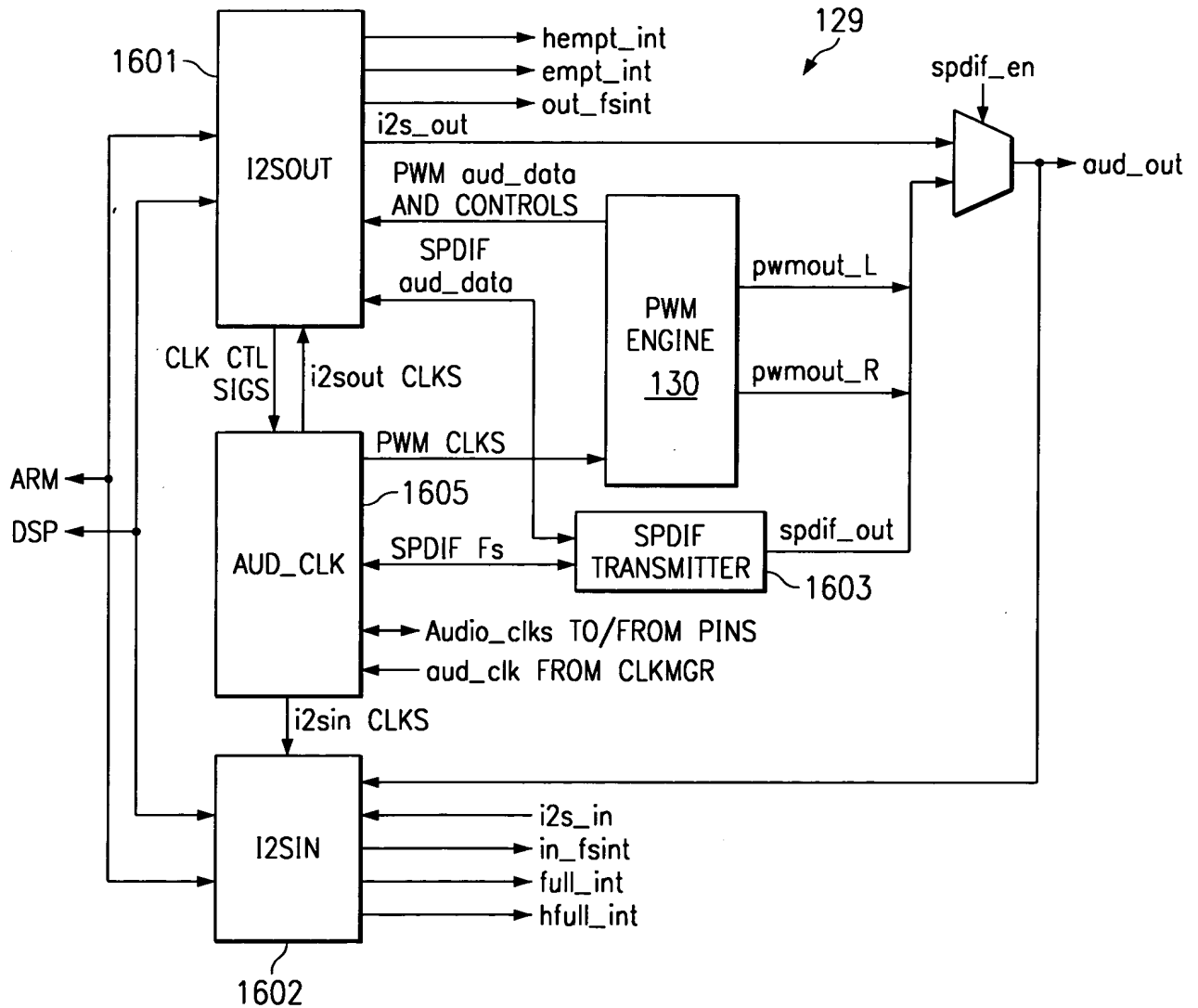


FIG. 16B

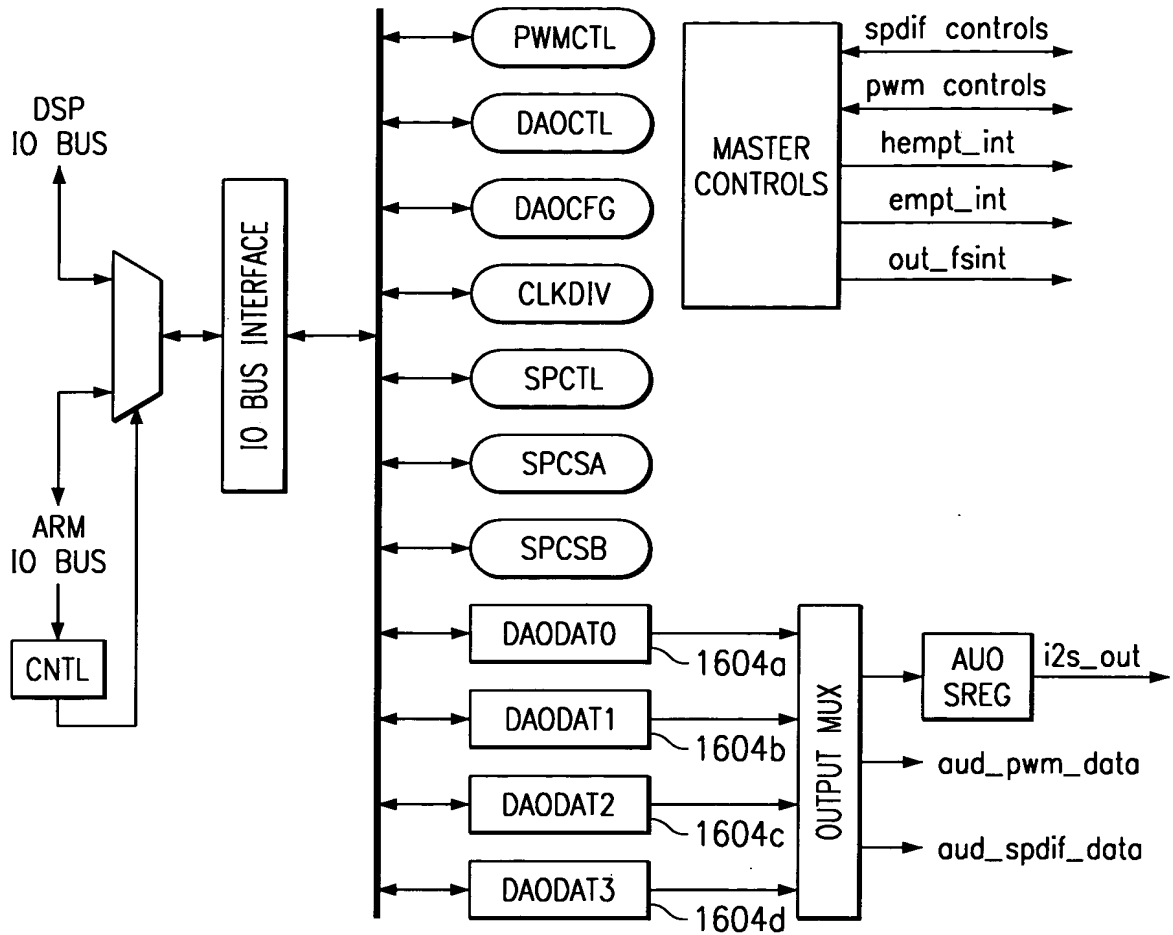


FIG. 16C

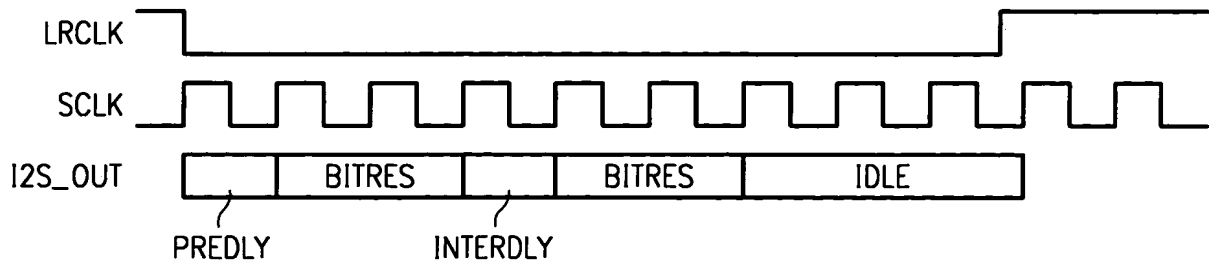


FIG. 16D

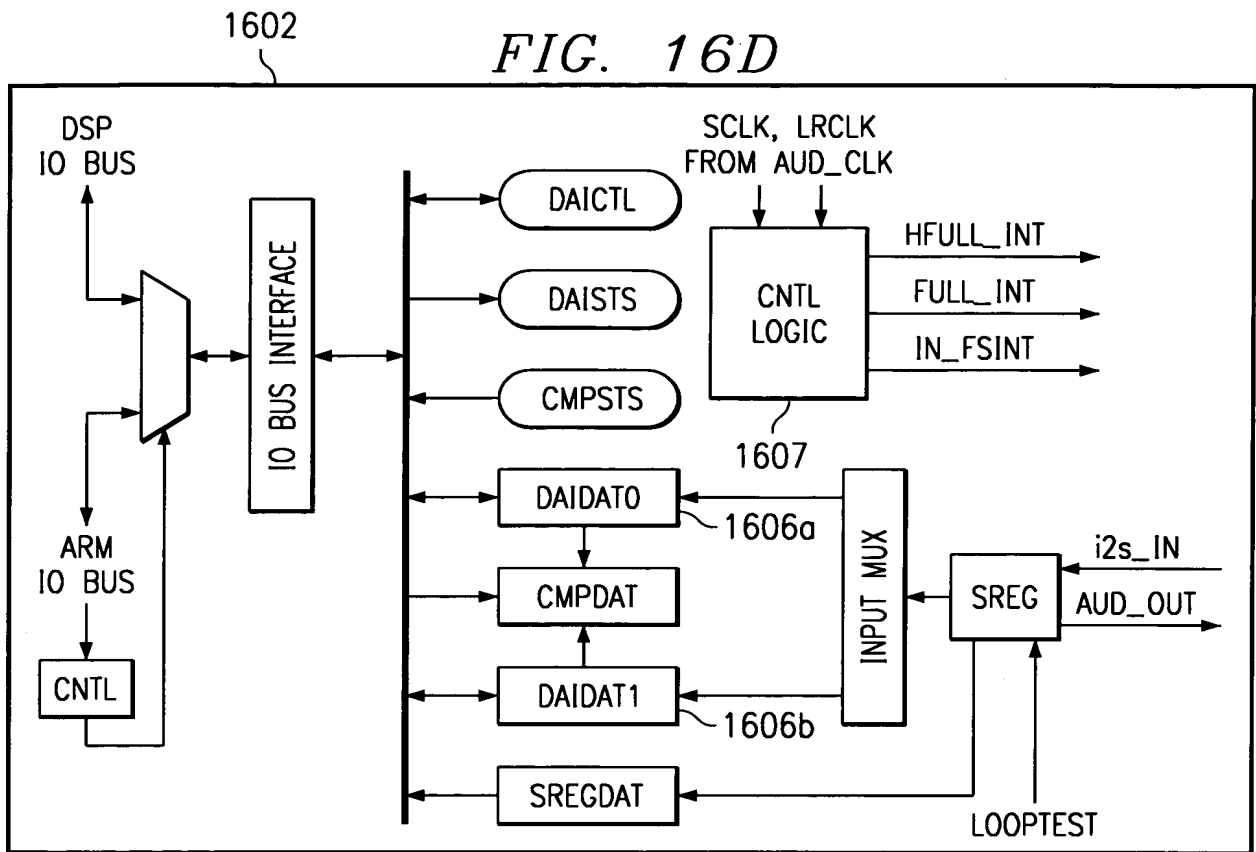


FIG. 19A

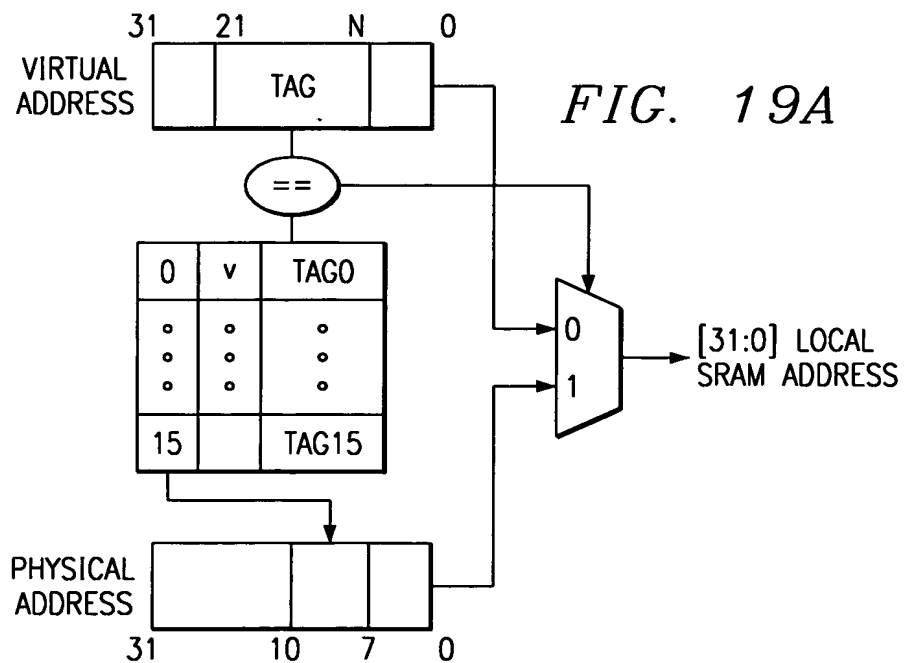


FIG. 19B

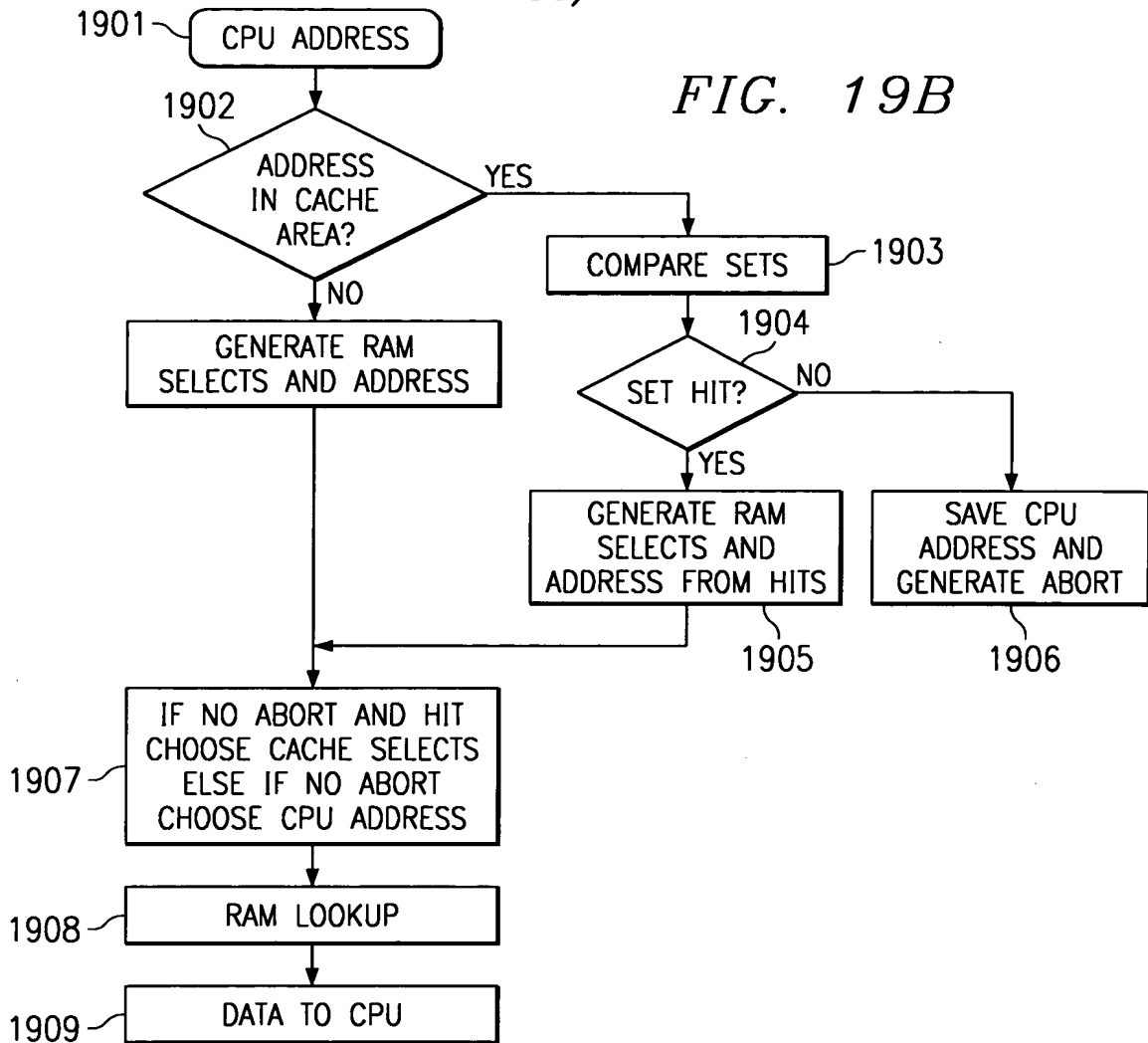
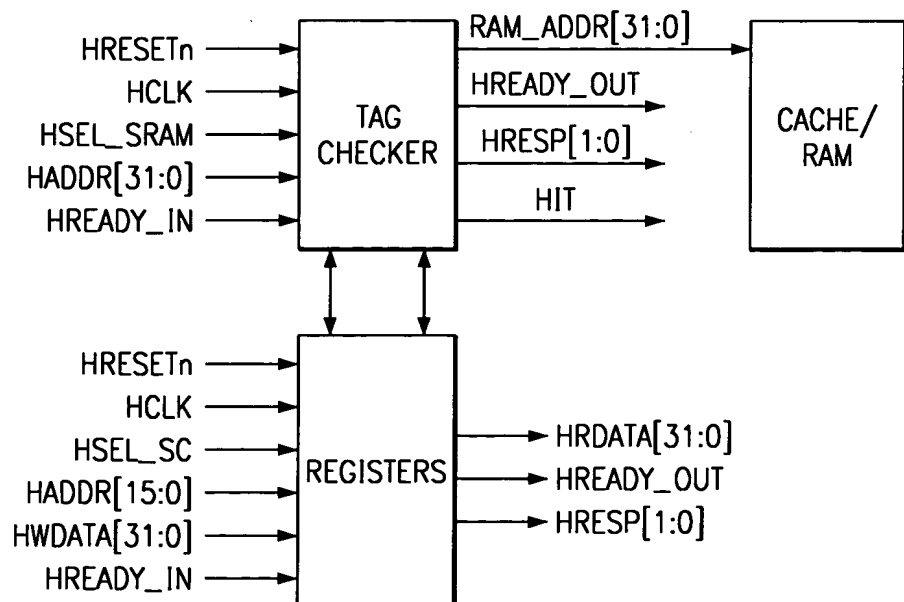


FIG. 19C



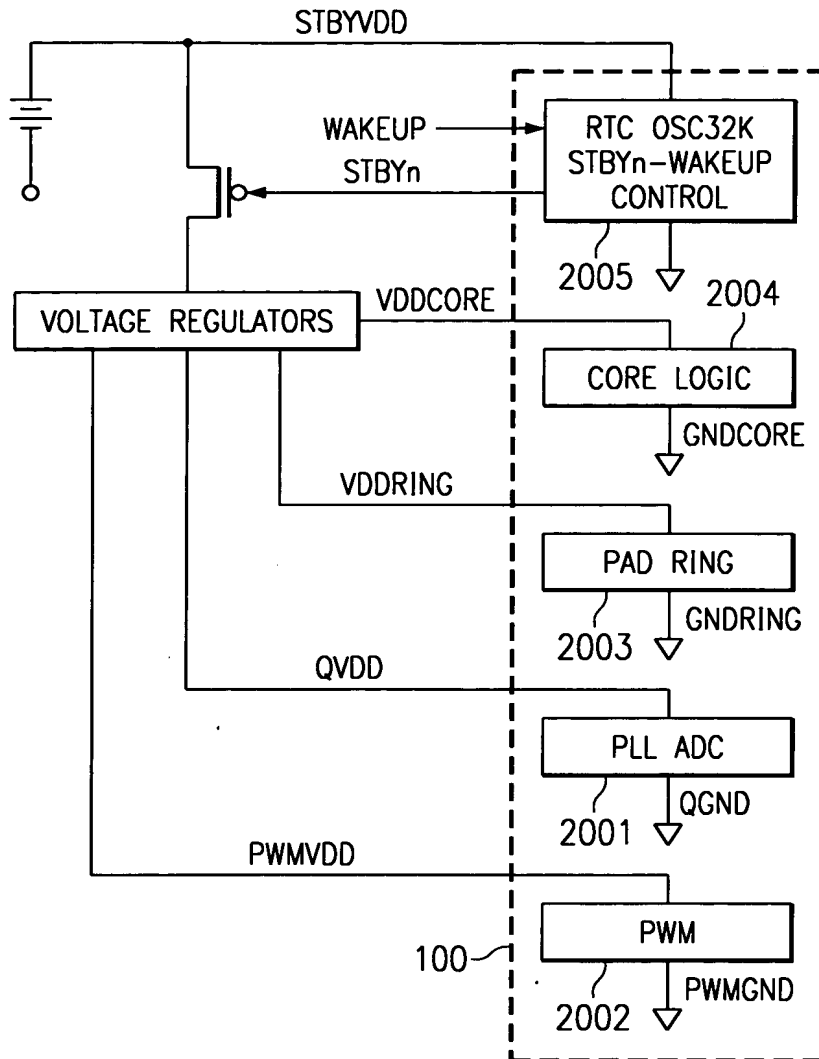


FIG. 20A

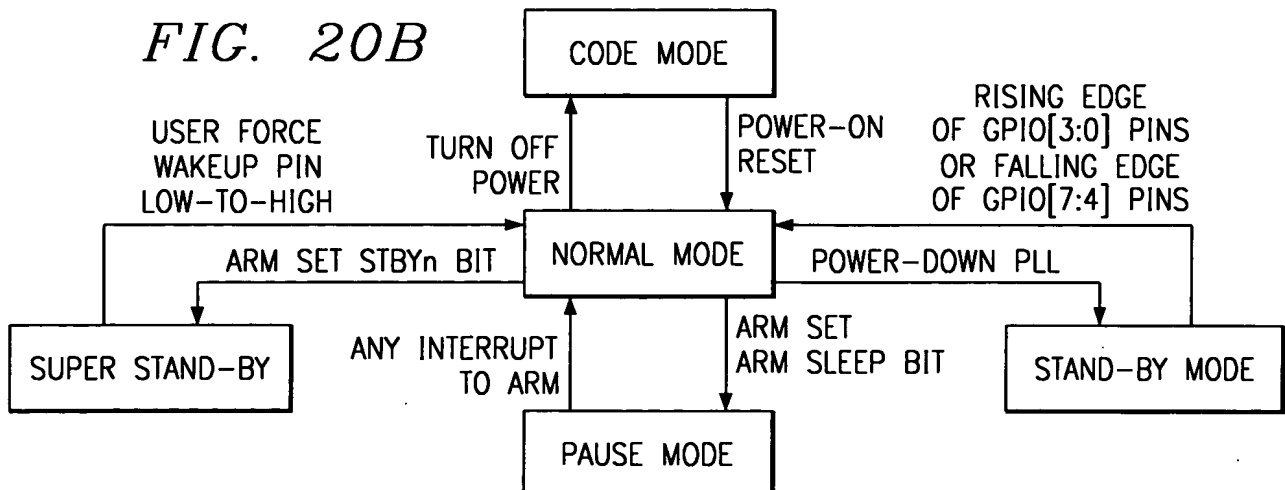


FIG. 20C

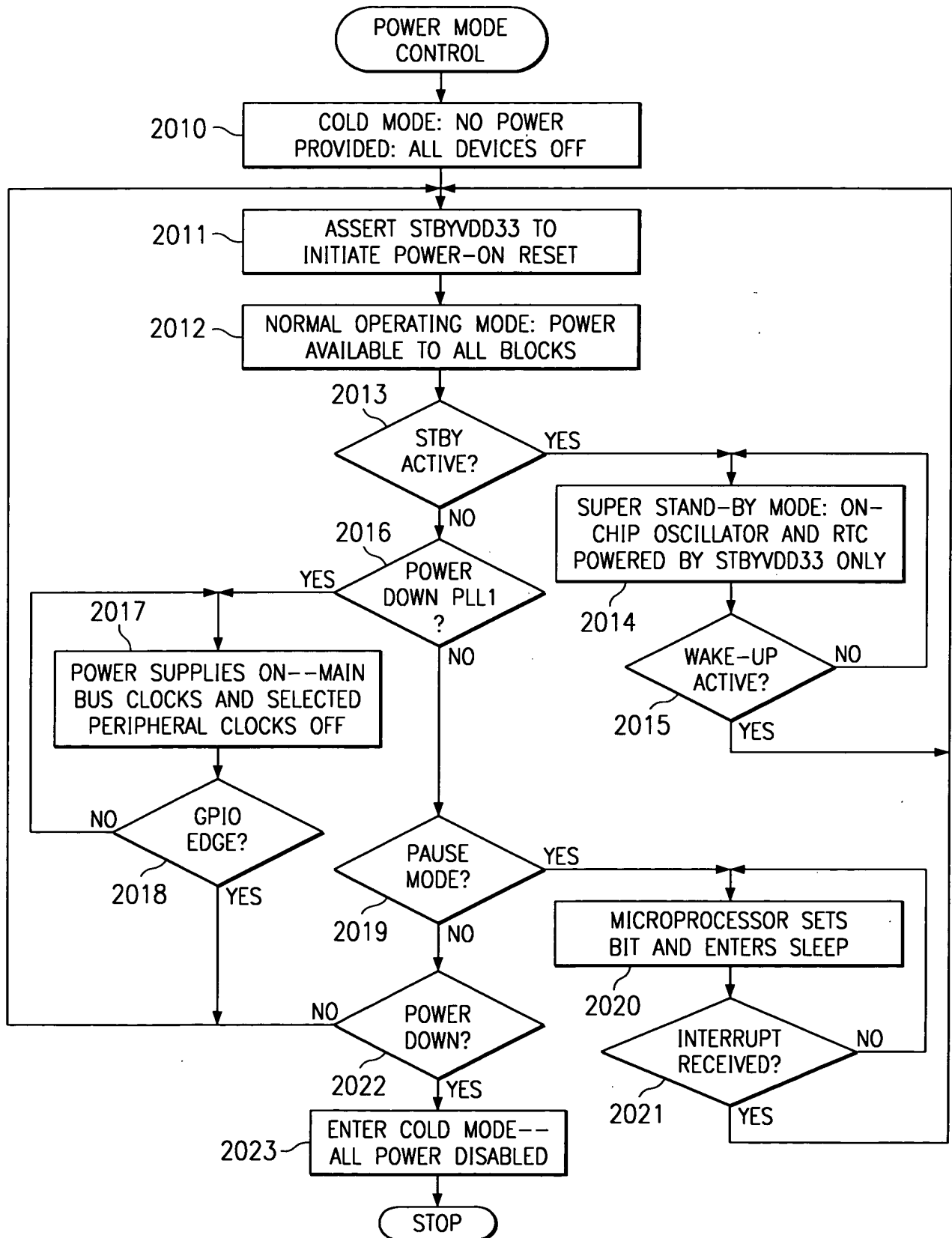
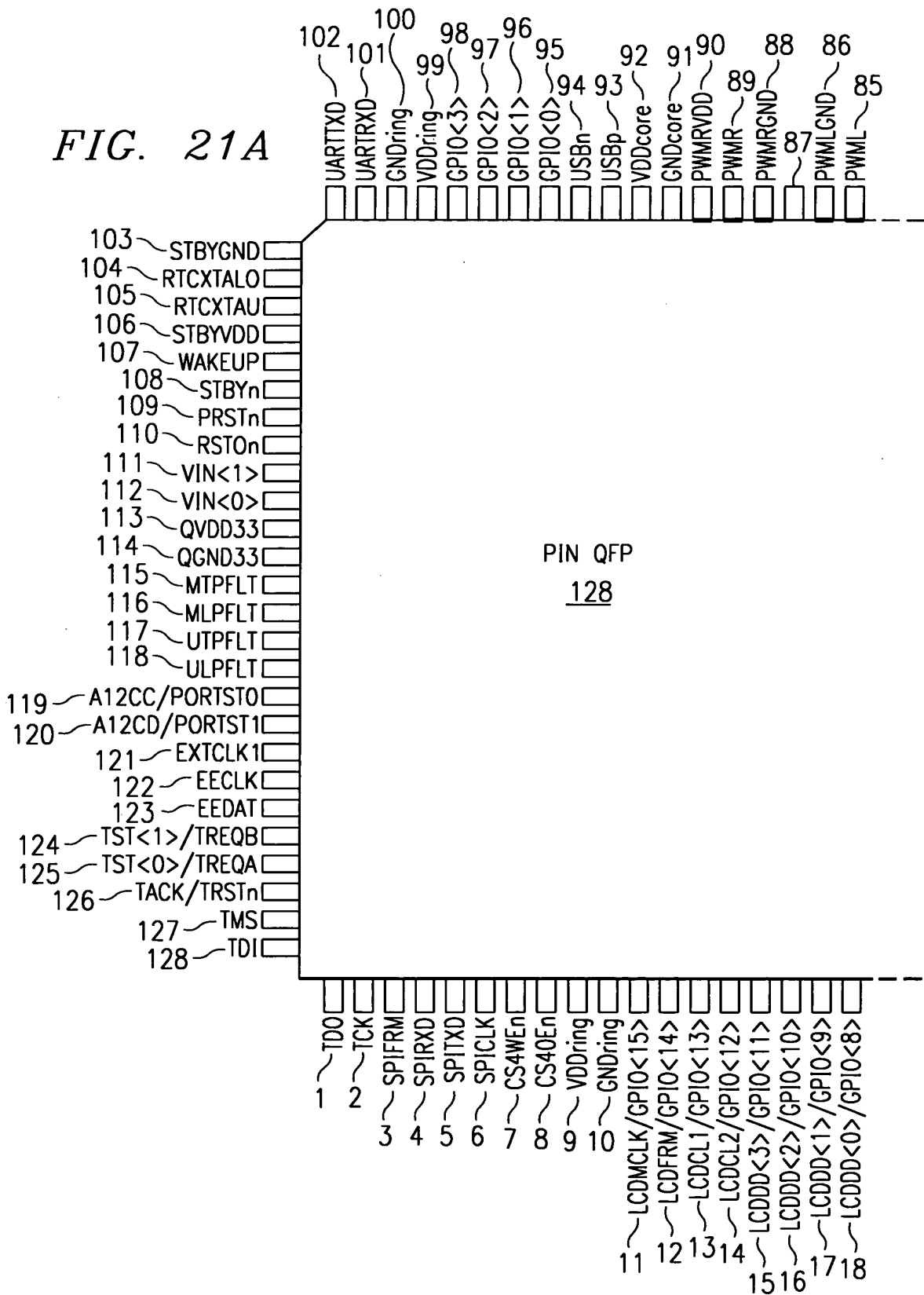


FIG. 21A



T00T60" 460T6600

FROM
FIG.
21APIN QFP
128

FIG. 21B

